The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 635.—Vol. XVII. LONDON, SATURDAY, OCTOBER 23, 1847. [Price 6d.

IMPORTANT SALE OF MINING MATERIALS.

MR. JOHN GOULD begs to inform the public, that he has received instructions to SUBMIT to COMPETITION, on Wednesday, 27th October, all the new and valuable MATERIALS and MACHINERY on EAST COOMBE MINE, in the parish of SWYMBRIDGE, DEVON, on such conditions as will be then and there produced—consisting of

A WATER-WHEEL, nearly new, 36 feet by 4; about 10 fathoms of 12-inch pumps, plunger lift, with door-piece, hatch-piece, stuffing-box, working case, and bottom, complete, shaft casing, &c.; 10 fathoms main-rod and plunger pole; 60 fathoms flat-rods, pulleys, shaft, and V-bob, complete; 10 fathoms 9-inch pumps, door-piece, working case, and windbore; 10 fathoms main-rod, casing, &c.; 1 drawing lift, with 8 12-inch pumps, 9 feet long; working barrel, clack doorpiece, and windbore; 1 drawing lift, with 5 9-inch pumps, 9 feet long, working-piece, windbore, and clack doorpiece; 1 drawing lift, with 4 9-inch pumps, 9 feet long, working barrel, windbore, and clack doorpiece; 2 6-inch shears, 40 feet high, with sheaves, complete; 2 capstans, an excellent new horse whim, 4 horse-whim kibbles and pulleys; 2 whim ropes (8-inch, single laid), 90 fathoms each, about 20 fathoms launders, with stands, &c.; smiths' shop, 1 40-inch smith's bellows, anvils, vices, and a quantity of smiths' and miners' tools, about 10 cwts. of pick-iron, about 3 tons of waste iron, fit for mining purposes, screw, stocks, taps, and plates; several miners' chests, several bundles of hoop-iron, tackle rope, grinding-stone, &c.; 1 ditto jigging sieve, with other dressing floor materials; a quantity of red pine and other timber, fit for mining purposes, with wheelbarrows, shovels, weighing machine,

COUNTING-HOUSE FURNITURE, &c.

The whole will be offered in one lot, or separately, to suit the convenience of purchasers.

Sale to commence at Ten o'clock in the forenoon.

Dated Barnstaple, Oct. 11, 1847.

MINE MATERIALS FOR SALE.—TO BE SOLD, BY PUBLIC AUCTION, without reserve, on Tuesday, the 2d of November next, at the Account-House of STRAY PARK MINES, CAMBORNE, Cornwall, at Twelve o'clock at noon, a 60-inch CYLINDER ENGINE, complete, 8-feet stroke; a BOILER, about 4 tons; and a lot of OLD SCRAP-IRON—the whole of which are now lying at Stray Park Mines, adjoining the Hayle Railway, by which the transit to the port of Hayle, or Portreath, is cheap and convenient.

Also, at the same time, will BE SOLD, without reserve, a 30-inch CYLINDER ENGINE, with 8 tons boiler, wood-work of engine-house, and first piece of main-rod—now lying at Wheal Kayle Mine, near Hayle, Cornwall. This engine is a first-rate piece of machinery, having been manufactured by Messrs. Harvey and Co., of Hayle Foundry, in 1845, and will be warranted as good, in every respect, as when it was first set to work.

For further particulars, apply to Mr. Vawdrey, Penpoll, Hayle, Cornwall; or to the auctioneer, Mr. Francis Pryor, Bell Cottage, Redruth.

Dated October 19, 1847.

SOUTH STAFFORDSHIRE.—IMPORTANT TO COAL AND IRONMASTERS.

VALUABLE MINES OF COAL AND IRONSTONE.—TO BE LET, BY TENDER, on royalty, all the MINES of COAL and IRONSTONE, lying within and under an estate called the FISHLEY FARM, situate at LITTLE BLOXWICH and NORTON, in the parish of Walsall and Norton, in the county of Stafford, containing about 40 acres.

The estate is supposed to contain the same measures of coal which are now being obtained from the adjoining pits, and ironstone underneath, and is contiguous to the Wyrley and Essington Canal, which will afford facilities of conveying the minerals to Walsall—a distance of about four miles, and the surrounding manufacturing districts.

It is probable that the South Staffordshire Railway Company will make a tramway from their main line at Pelsall, to the Pelsall Coal and Iron-works, and would, doubtless, extend it to this estate, which adjoins those works.

The property belongs to the municipal charity trustees of the borough of Walsall, who have obtained the sanction of the Court of Chancery to grant a mining lease thereof, the form of which has been approved by one of the masters of that Court, and, with a plan, may be seen, and any further information obtained, at the offices of Joseph Parkes, Esq., 21, Great George-street, Westminster; Mr. Jesse Moore, land and mine agent, Walsall; and Mr. Joseph Green James, solicitor, Bridge-street, Walsall, and Church-street, Darlaston, to whom tenders may be forwarded under cover, marked "Tender for the Fishley Mines."—October 13.

AT THE CHAMBER OF NOTARIES IN PARIS.—TO BE SOLD, BY PUBLIC AUCTION, on the 16th of November, 1847, with the reserved price of £40,000, the celebrated ESTABLISHMENT, founded by M. Hallette, sen., situated at ARRAS, PAS DE CALAIS, in complete organisation, containing FORGES, FOUNDRIES, and WORKSHOPS, for the MANUFACTURE of STEAM-ENGINES, for the Royal Navy, Commerce, and Railways, with all its PLANT and TOOLS, and the BUILDINGS, GROUNDS, and APPURTENANCES belonging to the same. The whole comprising about four acres, and affording constant occupation to 600 workmen.

For further information, apply personally, or by letter, at the offices of Mr. A. F. Bonard, French Advocate, 5, Chancery-lane, where prospectuses may be obtained.

WALL'S END COLLIERY.—TO BE LET, and entered upon on or after the 20th November next, for such a term of years as may be agreed upon, all that current-going COLLIERY, well known by the name of WALL'S END COLLIERY, at present held by William Russell, Esq., under lease from the Dean and Chapter of Durham—comprising the COAL MINES under the whole of the lands in the township of WALL'S END, in the county of Northumberland.

The Low Main and the Beaumont Seams, which have been bored to, remain throughout untouched; and the Beaubam Seam supplies the vend of the existing colliery.

The colliery is contiguous to, and has shipping berths in, the River Tyne.

Plans of the workings of the colliery, and further particulars, may be known on application to Mr. E. F. Boyd, Urpeth Colliery, Chester-le-street; or at the office of the Registrar of the Dean and Chapter of Durham, Durham.

Durham, Sept. 11, 1847.

STRONG MIXING PIG-IRON.—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as reported on by that great practical authority, the late David Mushet, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *deflective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,

Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS. DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.

Dated June 22, 1847.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 6d.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

22, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this." Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY, ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civeta Vecchia, three times a month.

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

SWANSEA DOCK COMPANY.—At an Extraordinary General Meeting of the Shareholders, HELD at the Guildhall Coffee-house, Kingstreet, Cheapside, London, upon Wednesday, the 20th day of October, 1847,

Lieutenant-Colonel CAMERON (deputy chairman of the company), in the chair,

Mr. Howden, the assistant secretary, read the advertisement calling the meeting, and the report of the committee of shareholders, also the bye-laws and regulations referred to in the advertisement. The following resolutions were thereafter severally proposed and carried,—viz.:

1. That this meeting, having heard the report of the committee named at the meeting of shareholders held on the 31st of August last read, together with the statements made to the meeting this day, are of opinion that that part of the recommendation of the said committee, by which they recommend that the number of directors of the company should be reduced from 17 to 9, ought to be adopted, and, in pursuance of the provisions of the special Act incorporating the company, resolve that the number of directors be reduced from 17 to 9, and hereby reduce the said number accordingly.

2. That the very irregular and illegal proceedings of the directors at Swansea, as recorded in the minutes of their proceedings this day read, and in particular in passing certain bye-laws and regulations on the 19th of August last, are such as to destroy the confidence of the London shareholders (who hold more than one-half of the stock of the company), in the fitness and ability of the directors resident at Swansea to conduct with advantage the business of the company, and this meeting are satisfied that such business cannot, with safety to the interests of the shareholders, be any longer confided to their management.

3. That in pursuance of the powers conferred on them by the Act of Parliament incorporating the company, this meeting hereby resolve—That the business of the company shall in future be conducted by nine directors, the same to be composed of the following gentlemen:—

Lieutenant-Colonel Cameron,	W. B. J. P. Cameron, Esq.,
Jacob Montefiore, Esq.,	Captain E. N. Norcott, R.N.,
N. P. Cameron Esq.,	Captain A. H. Erle, R.A.,
Captain J. Price, R.N.,	L. L. Dillwyn, Esq.,
	G. B. Morris, Esq.,

who alone shall have the usual and full powers conferred by the Act of Parliament to manage the business of the company as directors thereof, from and after this date; the other directors who have hitherto acted as their coadjutors, being hereby discharged from all further exercise of such power, and any interference as directors with the management of the affairs and business of the company. This meeting do also hereby determine that the order of rotation for the directors going out of office shall be arranged between themselves, and failing such arrangement, then by ballot in the usual form.

4. That the several bye-laws and regulations passed by the directors at Swansea, on the 19th August last, are most irregular and highly objectionable, and this meeting wholly condemn the conduct of the directors at Swansea, in passing the same, and this meeting hereby repeal and rescind the same accordingly.

5. That this meeting being satisfied that the business of this company can only be properly conducted in London, recommend the directors hereby confirmed as such, to make all proper arrangements without delay, for the future management of the business of the company in London.

6. That these resolutions be advertised in the London and Swansea newspapers, and a copy thereof distributed among all the shareholders. N. CAMERON, Chairman.

On the motion of Mr. West, seconded by Mr. Barham, and carried unanimously, the thanks of the meeting were voted to the chairman for his urbanity and able and impartial conduct in the chair.

ELECTRIC TELEGRAPH COMPANY.

LONDON, 345, STRAND, September 1, 1847.

COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM of TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, being so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.

STATIONS will BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES and DISPATCHES will be FORWARDED TO, and RECEIVED FROM, all the OTHER STATIONS of the ELECTRIC TELEGRAPH COMPANY.

In order to give to Merchants, Bankers, Manufacturers, and all connected with trade, the greatest possible amount of information, a ROOM will be RESERVED in each of the COMPANY'S STATIONS for SUBSCRIBERS, in which will be received, tabulated, and exhibited, all Intelligence of Commercial or Public Interest—for instance:

SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS.
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c.

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange; in this Station the whole TELEGRAPHIC NEWS of the COUNTRY will be CONCENTRATED, and FORWARDED in EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.

The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT of ENTRANCE to ALL the SUBSCRIPTION ROOMS of the COMPANY—including the Central Station at London.

The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will at all times be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.

Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—

London	Chester	Southampton	Derby	Darlington
Margate	Liverpool	Winchester	Nottingham	Newcastle
Ramsgate	Rotherham	Dorchester	Lincoln	Berwick
Deal	Barnsley	Bristol	Chesterfield	Edinburgh
Dover	Wakefield	Gloucester	Sheffield	Glasgow
Folkestone	Leeds	Cheltenham	Bradford	Scarborough
Canterbury	Halifax	Peterborough	Wisbeach	Bridlington
Northampton	Rochdale	Yarmouth	Lowestoff	Stamford
Coventry	Hull	Huntingdon	Cambridge	Norwich
Birmingham	Maidstone	Hertford	Chelmsford	St. Ives
Wolverhampton	Tonbridge	Manchester	Ipswich	Ware
Stafford	Gosport	Leicester	York	Colchester

J. LEWIS RICARDO, Chairman.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers,

W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

VIADUCTS AND OTHER RAILWAY WORK.—The attention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSEL ASPHALTE, as the *only impervious and permanent* covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude.

In order to guard against the use of spurious materials, it is important that all applications for works to be executed be made direct to this company; and, as a further protection, it is suggested that Engineers, Architects, and Contractors, should require a CERTIFICATE from the company that the proper description of material has been used.

Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one.

I. FARRELL, Secretary,

Seyssel Asphalte Company, Stangate, London.

TO CAPITALISTS, ENGINEERS, AND OTHERS.—The ADVERTISER has some important IMPROVEMENTS in STEAM-ENGINES, &c., which have met with the full approbation of competent authorities, and now requires pecuniary assistance in patenting the same. The inventor feels assured, that any gentleman having knowledge of these matters, will be satisfied with his plans, both in a scientific and commercial point of view, as to induce him to render at once the desired cooperation.—Address Mr. Weston, care of the Editor of the *Mining Journal*, 26, Fleet-st.

TO SOLICITORS AND AGENTS.—FOR SALE, a FEW SHARES in the EQUITY AND LAW LIFE, and the LAW FIRE, ASSURANCE OFFICES. Also, SHARES in the NATIONAL REVERSIONARY INVESTMENT COMPANY.—Apply to Messrs. Watson and Cuell, 1, St. Michael's-alley, Cornhill, London.

TO IRONMASTERS—BLOWING-ENGINE FOR SALE.—A CONDENSING ENGINE, steam cylinder, 30-inch diameter; blowing cylinder, 52-inch diameter; length of stroke, 7 feet: in good order—has been worked four years.—Apply to Mr. Joseph Bowman, Pembroy, near Llanelly, Swansea.

IMPORTANT TO IRONMASTERS.—Powerful BLAST-CYLINDERS, with STEAM-ENGINES, complete, on an improved principle, SUPPLIED TO ORDER, at one-half the usual cost.—References, and full particulars, can be had on application to Mr. Dircks, agent for patented inventions, No. 32, Moorgate-street, City.

IRON FOUNDRY TO SELL, OR LET, IN MONTROSE.—TO BE SOLD, OR LET, as may be agreed on, the LINKS FOUNDRY OF MONTROSE, along with STEAM-ENGINE and TOOLS necessary for a local trade.—Apply to D. Y. Stewart.—Montrose, October, 1847.

WANTED—A CAST-IRON WATER-WHEEL, from 24 ft. to 30 ft. diameter, and 3 to 4 ft. breast.—Application to be made, stating price and particulars, to Edward Williams, mine agent, Oswestry, Salop.

STEAM-ENGINE.—WANTED, a SECOND-HAND PUMPING ENGINE, of from 60 to 80-horse power.—Full particulars to be sent (post-free) to Thomas Hay, C.E., 4, Beaufort-buildings, Strand, London.

NANTYGLO IRON-WORKS.—WANTED, a competent PERSON to SUPERINTEND the MINE WORKS.—Application to be made either personally or by letter.

CUNNINGHAM & CARTER'S PNEUMATIC RAILWAY SYSTEM.—The attention of the scientific public is requested to this SYSTEM, which unites great simplicity with economy, and is entirely free from those dangers and consequences which are the inseparable attendants on the use of the locomotive engine.

The MODEL may BE VIEWED, and every information given, on application to Mr. Cunningham, Auction Mart Coffee-house; or Mr. Carter, engineer, Peak-hill, Sydenham.

MADRAS AND ARCOT RAILWAY COMPANY.—Notice is hereby given, that NO FURTHER APPLICATION for SHARES will be RECEIVED after FRIDAY, the 29th day of October, 1847. A. C. SIMPSON, Secretary.

Offices, 2, Guildhall Chambers, Basinghall-street, Oct. 21, 1847.

CASCADE AND WHEAL BARBARA MINES.—SHARES in the ABOVE MINES TO BE SOLD—Cascade, £1; Wheal Barbara, £?. The prices quoted are—Cascade, £2; Wheal Barbara, £4 to £5.—See *Mining Journal*.

Apply to Mr. Trenery, Mining Offices, 9, St. Michael's alley, Cornhill, London.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.

THREE KING'S COURT, LOMBARD-STREET, LONDON.

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.*

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

JAMES LANE, MINING SHARE DEALER, 75, *OLD BROAD-STREET, LONDON.*

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON,—and

4, *STAMP-OFFICE BUILDINGS, MANCHESTER.*

PROSPECTUSES may be had, and SHARES obtained, in the SILVER-LEAD and COPPER MINES connected with these offices, on application to the secretaries, at London or Manchester. T. H. TAUNTON, London.

W. SHEARMAN, Manchester.

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged. 6, Bank Chambers, opposite the Bank of England.

ASTURIAN MINING COMPANY.—Notice is hereby given, that the ADJOURNED GENERAL MEETING of the registered shareholders in this company will be HELD at the company's offices, on Saturday, the 30th day of Oct. inst., at Two o'clock precisely. By order of the board,

K. MACKENZIE, Secretary.

Offices of the Company, No. 9, Austinfriars, Oct. 15, 1847.

COPIAPO MINING COMPANY.—Notice is hereby given, that the ADJOURNED MEETING of the shareholders in this company (directed to be called at the last general meeting of shareholders, in July last) will be HELD at the company's office, 22, Austinfriars, on Friday, the 29th inst., at One o'clock precisely.

By order of the directors, FRED. GRELLET, Secretary.

22, Austinfriars, October 19, 1847.

PATENT GALVANISED IRON COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, on Monday, the 8th November next, at One o'clock precisely; and is specially called, for the purpose of considering the propriety of calling up the remaining £4 per share on the 20,407 effective shares of the new capital of the company, created 28th October, 1845.

By order, S. VINCENT, Secretary.

3, Mansion-house-place, London, October 22, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.—A DIVIDEND, being the third, of SIX SHILLINGS per share, or 5 per cent. upon the paid-up capital, has this day been declared, PAYABLE on Monday, the 11th October inst., and on every succeeding Monday, between the hours of Eleven and Three o'clock. The coupons, with a list, according to a form, which may be obtained at the office, must be left for examination three clear days previous to payment.

57, Old Broad-street, October 6, 1847. WM. NICHOLSON, Secretary.

TAMAR SILVER-LEAD MINING COMPANY.—At the Annual General Meeting of shareholders in this company, held at the offices, 44, Finsbury-square, on Thursday, the 21st inst., it was

Resolved,—That the reports, of the directors, P. N. Johnson's, and Capt. Sprague's, together with the accounts, now submitted, be received, adopted, and entered in the minute-book.—Carried unanimously.

Resolved,—That the thanks of this meeting are due to Mr. Johnson, for bringing the mine and smelting-works to their present state, and his conduct in the chair on the present occasion; as well as to the directors, for their attention to the affairs of the company.

P. N. JOHNSON, Chairman.

LONDON AND PROVINCIAL JOINT-STOCK LIFE INSURANCE COMPANY.—The DIRECTORS invite the public generally, also BUILDING SOCIETIES and BORROWERS, through them or from other parties, to examine the peculiar system and striking advantages offered by this office.

Every description of life assurance, investment, and loan business transacted.

Low rates of premium and three-fourths of profits divided.

For prospectuses, &c., apply to JOHN MASSON, Secretary.

Offices, 39, Nicholas-lane, Lombard-street.

COMPLETION OF WILME'S HAND-BOOK FOR MAPPING, &c.

This day is published, price 8s. Sixshillings plain—Twelve Shillings coloured, Part VI., of

A HAND-BOOK FOR MAPPING, ENGINEERING, AND ARCHITECTURAL DRAWING, containing 8 large folding plates, 39 wood-cuts, 78 pages of letter-press—Introduction, Index, and full INSTRUCTIONS FOR LITHOGRAPHING and ZINCOGRAPHING PLANS and DRAWINGS.

Published by J. Weale, 59, High Holborn; and at the Railway Plan Drawing Offices, No. 15, Featherstone-buildings, Holborn.

THE MIXED GAUGE RAILWAY.

The approaching opening of the mixed gauge Gloucester and Cheltenham Railway will bring before the unerring test of practical results the very strange diversity of opinion that prevails between Mr. Robert Stephenson and Mr. Brunel, on one of the material features of such a system of locomotive traffic—its safety. On Saturday last, with Mr. R. Stephenson's observations on "Double Gauge Railways" in our hand, we walked over the mixed gauge line now ready to be worked between the above places, and carefully examined the mode in which Mr. Brunel has effected his junctions of the broad and narrow gauge lines. It is scarcely possible to conceive any two things more unlike than the paper complexity and danger of the mixed gauges, as described by Mr. Stephenson in his pamphlet, and the minute diagrams which accompany it, and the simplicity and safety of the mixed gauges as they actually exist on the Gloucester and Cheltenham line. Mr. Stephenson, whose very clever little work has been printed for private circulation [see *Mining Journal* August 21] among those whose opinions are of practical use to the opponents of the mixed gauges, makes out on paper a very strong case against the safety of the system, but it is made out by stating difficulties which are not to be found upon the mixed gauge railway itself. The usual mode of effecting junctions by crossings and switches, though a very simple practical matter indeed, is one with the nature of which very few persons are conversant. The crossings and switches, common to all railways, appear singularly complex when inspected by a person unacquainted with the working of a line; and a clever practical man can, by ingeniously-sketched diagrams, on a scale of 1-16th of an inch to the foot, and explanatory observations, and remarks on the asserted danger that must ensue from any additional crossings or switches to a certain given number of crossings and switches, so confuse such a non-practical man as to satisfy him that that which is simple and has been in safe and hourly operation for years past, is confusion worse confounded, and pregnant with the most imminent danger to life and limb. The almost inevitable impression which the perusal of Mr. Robert Stephenson's pamphlet leaves on the mind of a person who has never examined the realities himself, is, that a mixed gauge of three rails, one of which shall be common to both gauges, is not only a very complex but a very dangerous plan of conducting railway traffic. If such a person found it his duty, as we have felt it to be ours, to visit the line and judge for himself, he would see that the asserted additional and dangerous complexity of crossings and switches has no existence whatever, and that the asseverated danger is infinitely less than that which has been, for years past, constantly incurred by passengers travelling in trains running through the numberless junctions upon the various narrow gauge lines of this country. To us it is a matter of astonishment how any difference of opinion can exist between such eminent men as Mr. Stephenson and Mr. Brunel, on the question of working traffic on the mixed gauge of three rails with perfect safety. Our astonishment is raised by the bare fact, that the existing Gloucester and Cheltenham mixed gauge line, now ready for traffic, offers an unmistakeable proof that the danger to be apprehended from its asserted complexity is purely imaginary. Even the very junctions are effected without the introduction of a switch. The mode in which this is done is simple. For instance, on a rail that is common to both the broad and narrow gauge, and where, in order to allow the line to curve off, the rail is necessarily cut, Mr. Brunel has placed a fixed point. This point is on the side of the inner rail, and is made effective for the broad or narrow gauge trains by an ordinary check rail, which keeps the wheels upon either gauge. This operation is assisted by depressing the inner rail of the narrow gauge line, so as to keep the flange of the wheel on the inner side of the fixed point, and raising the inner rail of the broad gauge line, so as to throw the flange of the wheel on the outer side of the point. This is no new mode of assisting a check rail on a curve; it has been in operation upon the Great Western Railway for years. In fact, this fixed point possesses the practical use of a switch, without the chance of the results of neglect on the part of the switchman.

The rails of the mixed gauge lines are laid on heavy transverse sleepers. The rails weigh 83 lbs. to the yard, and the bearings are 3 ft. between the chairs. The joint chairs have two screws on each side. The whole line is, in fact, most substantially laid; and we unhesitatingly assert, that the junction of the gauges upon the Gloucester and Cheltenham Railway is as simple and as safe as the junction of any narrow or broad gauge line in the kingdom. At present, the passenger proceeding to Cheltenham by the Great Western Railway is carried to the broad gauge platform of the Gloucester station, whence he proceeds to the narrow gauge portion of the station, and books himself on by the Birmingham and Gloucester Railway to the Cheltenham station, which is a considerable distance from the town. The Great Western Company have constructed what is called an "avoidance" line, which enables them to carry their passengers between London and Cheltenham, and *vice versâ*, without taking them into the Gloucester station. To this avoidance of an inconvenience is added the great advantage of being carried into the heart of the town of Cheltenham, the broad gauge station being within a very short distance of the High-street. The station is a very elegant and commodious one, and the company have in their arrival and departure office and waiting-room arrangements very praiseworthily studied the public conveniences. It is stated that the line will, in a few days, be open for public traffic.—*Morning Herald.*

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IMPROVEMENTS IN THE SMELTING OF COPPER AND OTHER ORES.

[Specification of Patent granted to François Stanislas Moldon de Sussex, of Mill-wall, in the county of Middlesex, manufacturing chemist, for improvements in the smelting of copper and other ores. Patent dated 23d March, 1847.]

This invention consists of certain improvements in the process of smelting copper and other ores, whereby the metal is obtained more readily and more economically from said ores, or gangues, and also freer from any admixture of sulphur or arsenic, with which copper and other metals, as they are generally smelted at Swansea and elsewhere, are always contaminated, to the detriment of their malleability. These several improvements are applicable to the various kinds of ore of copper, silver, and other metals, such as the sulphurets, chlorides, oxides, and the carbonates, which are the most general kinds of ores to be met with in smelting-works; also, to the metallic salts of silver, and other metals, which are not so generally met with in smelting-works; such as, for instance, the sulphates or other salts of copper, silver, and other metals. Whatever kind of ore or metallic salts may be treated according to this invention, so as to obtain ultimately the metals therein contained, the patentee always uses the materials whereby an enterchange of elements may be effected—the acid, sulphur, or other admixture contained in the ore or metallic salt, forming a new combination with the substance made use of, by the agency of heat, or otherwise, while the metal to be obtained is thus converted into an oxide, and into metal.

The mode of treating the various metallic combinations hereinbefore mentioned, is thus described:—1st. With regard to that part of said invention by which copper is obtained from the sulphuret of that metal, it should be understood, that, contrary to the present modes of smelting copper, whereby a certain excess of sulphur must always be retained in the ore under operation, such means and substances are employed as will cause an entire or complete desulphurisation; and said means and substances having either such energy in decomposing sulphurets, or such affinity for the sulphur, much of the usual length of time occupied in smelting will hereby be saved, and by smelting only. When all the sulphur is entirely removed, the metal is necessarily obtained in a pure state; but the mode of obtaining copper from its sulphuret will suffice as an example. It must be clearly understood, that silver and other metals will be obtained when the sulphurets of the several metals respectively shall be treated as will be hereinafter described, in the same manner as copper, or its sulphurets. In order to desulphurate copper ore, a furnace of the reverberatory kind is to be used; and, having what is commonly called sorted the ore, previously reduced into a fine powder, and sifted in the usual way, and so mixed the rich and poor ore, that, by analysis, the quantity of silica therein contained may be, as nearly as possible, in the ratio of 60 per cent. of silica; or, instead of sorting the ore, having ascertained, by analysis, the composition of the sulphuret to be smelted, should the quantity of silica be deficient, add to it so much sand as will be found necessary to form a compound of sulphuret of copper and silica, containing from 50 to 60 per cent. of the latter; but, on the contrary, should the proportion of silica be ascertained to exceed 50 or 60 per cent., and the other components of the ore be considered in too small a proportion, then, previously to subjecting the pulverised ore to the process of desulphurisation, add to it such proportions of lime, fluor-spar, or other earths, as may be considered necessary, according to the present practice in smelting-works; observing, however, that in smelting copper according to this invention, the proportions of silica, lime, or alumina, contained in the ore, are not so important as in the usual mode of smelting—the slag being otherwise rendered easily fusible. Take about 5 cwts. of the powdered ore, and mix intimately therewith about 25 lbs. of finely-sifted charcoal, anthracite coal, or other combustible matter, free from sulphur, or other quantities with same proportions; and then spread evenly over the hearth of the reverberatory furnace the mixture of ore and combustible matter, and allow the same to be exposed, during three or four hours, to a temperature insufficient to fuse the metal, or, indeed, to bring the ore to a red heat; the arsenic, and most of the sulphur, will be thereby volatilised, as sulphuret of carbon: but it must be observed, that, even after heating a sulphuret in contact with carbonacious matter, there is still invariably a certain portion of sulphur remaining; and that, owing to the draft of the furnace—which brings air, or oxygen, in contact with the sulphuret—there are also certain acids of sulphur formed, which are not easily separated from the metal, even after several roastings; and, owing to the presence of such remaining portion of sulphur, or to the combination of the acid of sulphur with the metal, when the ore containing them is subjected to the necessary temperature for causing fusion, the metal contained therein and the sulphur fuses together, and the ingot is in that state unfit for any purposes to which copper is applicable, and must be subjected to several subsequent refinings. To get rid of these last portions of sulphur, or acids of sulphur, employ one or the other of the two following modes:—1st. Having lowered the temperature, by removal of fuel, add to the ore previously roasted with anthracite, charcoal, or coals containing little or no sulphur, about 4 or 5 per cent. of either alumina or magnesia, or magnesian limestone, and, at the most, 1 per cent. of the nitrate of soda, nitrate of potassa, or nitrate of lime, and mix the whole intimately, by means of a rake, during which time the flues of the furnace are shut, by means of the damper, to avoid as much as possible the small particles of the ore escaping; which being stirred, then raise the temperature again, but not so as to cause fusion of the material, but somewhat higher than before, by the addition of a small portion of nitre, and the treatment hereinbefore described; the sulphur remaining in the ore will be wholly oxidized, and thereby transformed into sulphuric acid, which, together with the acids of sulphur already formed during the operation of roasting, will combine with the magnesia, or alumina, according to which of these substances has been employed, and thus form sulphate of magnesia, or alumina—which sulphates having the property of yielding their acids at a high temperature, will be decomposed, all the sulphur and acid of sulphur being volatilised; and the copper being thus wholly brought to the state of oxide, the ore so desulphurated is removed from the reverberatory furnace, to be subsequently reduced into metal, as will be hereinafter described. This part of the invention may be easily varied, as will be shown in the second method of desulphurisation; or by adding magnesia, or alumina, or magnesian limestone, in the first instance, with the ore and anthracite, or other carbonaceous matter, but this will not afford so beneficial a result. The proportions hereinbefore given may be altered and increased, should the quantity of sulphur existing in the ore be found greater than 3 or 4 per cent., which will rarely be the case, whenever the process of roasting shall be carried out with care, avoiding to raise the temperature too high; and, lastly, the quantity of nitre may also be varied, using more or less in proportion to the sulphur existing in the ore, and in the ratio of 1 of nitre to 4 of sulphur, or thereabouts. But it should be understood, that any other oxidizing agent, such as manganese, or the manganates of soda and potash, may be substituted for nitre; and that in such case, the proportions of manganese, or manganates, or other oxidizing agents, should be regulated by the quantity of oxygen they may respectively contain; and that so much of either of said oxidizing agents as should be employed would contain as much oxygen as there is in 1 part of pitre, which is employed, as hereinbefore mentioned, for 4 parts of sulphur.

2d. The other method, or methods, of desulphurating copper, or other ores, is to be carried into practice in the following manner:—The powdered ore, mixed with the same proportions as before mentioned, if anthracite, or other combustible matter, also reduced to powder, being roasted in a reverberatory furnace during three or four hours, in the manner hereinbefore mentioned, is at the end of that time to be removed from the furnace, and subjected to the following mode of removing the acid combinations of sulphur with the ore or the metal:—Close to the reverberatory furnace, assigned to the operation of roasting, is a tank, made of iron, or other material, placed underground, and containing alkaline solutions, such as liquor of ammonia, solutions of soda, potassa, magnesia, or other alkaline earths, forming soluble salts, with acids of sulphur. But the most economical substance, and that meant mostly to be employed, is ammonia, principally in its caustic state, although carbonated alkalies would also answer. Pour into the tank from 75 to 80 lbs. of liquor of ammonia, of specific gravity 900, and add to it as much water as will be sufficient to cover the whole quantity of ore previously roasted in the furnace; then cause the quantity of roasted ore (5 cwts.) to be thrown into the tank while still hot, stirring two or three times, and then allowing the ore to subside at the bottom of the tank. Then draw off the clear liquor, by means of a syphon, into another tank, placed also underground, but lower down than the first tank; and now the ore precipitated in the first tank is to be removed therefrom, it being now deprived of all the acid of sulphur it may have previously contained, while the liquor drawn off into the other tank will be found to contain sulphate of ammonia, if ammonia has been used, or sulphate of soda, or the other alkalies, if said other alkalies have been employed; but should ammonia have been used, as hereinbefore described, and the contents of the second tank be a sulphate of ammonia, now add, either in the cold, or at a temperature under the boiling point, as much lime as may be found necessary to combine with the acid contained in the sulphate of ammonia; and it will be found, that 20 to 28 lbs. of lime will be amply sufficient to combine with said acid, forming an insoluble sulphate of lime, which will soon subside—while the ammonia will become caustic, and, being transferred into the first tank by means of a pump, will serve the before-mentioned purpose of removing all acid combinations of sulphur from other charges of ore roasted in the reverberatory furnace, in the manner before described; it being only required to replace at each time the alkaline liquor, it may be used over again, and the small quantity lost by being taken up by the ore will be amply replaced by adding at each time 6 or 8 lbs. of liquor of ammonia, of specific gravity 900—the charge of ore being, as before, of 5 cwts. In case soda, potassa, or alkaline earths be used, the proportions of soda, as the most, would be from 20 to 25 lbs., dissolved in sufficient quantity of water to cover the whole produce of a charge of 5 cwts. of ore previously roasted; and should lime or magnesia be substituted for soda or potassa, the proportions to be used of either of the said alkaline earths, will not necessarily exceed 28 lbs. of the same charge of the ore, as before stated; but the patentee considers the use of ammonia in all respects preferable, when it can be easily procured.

3d. Instead of adding any oxidising agents, and principally nitre, as before described, in regard to the first mode of desulphurisation, and instead of treating the roasted ore as also before described, in the second mode of desulphurisation, use a solution of nitrate of soda, or potassa, or lime, using about 6 or 7 lbs. of nitre for 5 cwts. of ore, dissolved in a sufficient quantity of water to moisten the whole quantity of said ore; the whole being, as will be hereinafter described, subjected to the smelting operation in that state of admixture with nitre, will be deprived of its remaining portions of sulphur, but by no means so completely as by the second mode, hereinbefore given, for desulphurating metallic ores, since there would be a sulphate of soda present, which, during the process of smelting, would necessarily be transformed into sulphuret; and, as has been particularly observed, as copper or the other metal enters into fusion when submitted to the necessary temperature, as will be fully hereafter described. That part of this invention by which sulphates of copper, or other metals are to be treated so as to obtain here also an oxide, to be subsequently reduced to the metallic state, is thus described, sulphate of copper being taken as an example, it being always in remembrance that the other metallic sulphates will be treated in the same way as the sulphate of copper, and in the manner following:—Take sulphate of copper, however obtained, and dissolve it in a pan, having fire playing underneath, or heated by steam, and then add to said solution as much magnesia, alumina, or other earths (preferring, however, to use magnesia, or magnesian limestone), and for every equivalent proportion of sulphate of copper, or for every 40 lbs. of real sulphuric acid contained therein, add to said solution one equivalent of magnesia, or about 20 lbs. A decomposition soon takes place; the acid, combined with the oxide of copper, passes to the magnesia, and forms a sulphate of magnesia, while the oxide of copper, being insoluble, subsides. Draw off the clear liquor into another pan, next to the former, containing the precipitated oxide of copper, and cause said liquor to be evaporated to dryness, the residue being a dry sulphate of magnesia; which being heated to a red heat, with a jet of steam, and after the manner specified in a patent granted to Mr. de Sussex, the 19th February, 1847, for improvements in the manufacture of chlorine, hydrochloric acid, and nitric acid, &c., will be decomposed into an oxide of magnesium, and sulphuric acid will be evolved and condensed, as described in the patent before mentioned. Instead of alumina, magnesia, or other alkaline earths, soda, potash, or ammonia, could be employed in decomposing metallic sulphates, in and after the method herein given, as effectually, but not so economically. That part of this invention applicable to chlorides, is thus described, in reference to the mode by which chlorides of silver are treated. This chloride is principally to be met with as a natural production. The said chloride of silver being insoluble, is to be mixed with a due proportion of soda, or potash—that is to say, for every 144 parts by weight of said chloride contained in the ore, 32 parts by weight of real soda, or 48 parts by weight of real potash, are to be mixed with the ore, first reduced to powder, and about 100 parts by weight, at the most, of charcoal, anthracite, or such like carbonaceous matter, are also to be mixed with the chloride of silver, and the above quantity of alkali; then as much of the mixture as it may be found advisable to reduce, is exposed in a crucible, or in any convenient furnace, to a temperature exceeding a red heat, whereby the silver will be reduced to the metallic state, and form an ingot easily separable from the slag; while the alkali used will be converted into a chloride, and part of the combustible matter will be evolved, in the state of carbonic acid; but, although soda or potassa will be found to answer the purpose of obtaining silver from a chloride of that metal, it has been found, that instead of soda or potash, it is better to employ silicates of soda or potassa, in which the alkali is in excess; and thus for every 144 parts by weight of real chloride of silver, use 62 parts by weight of said silicate of soda or potassa, or about the same proportion of aluminate of soda or potash, or any other compound of alkali with the earths, or alkaline earths—the process being, in all other respects, the same as before described, when soda or potash alone are made use of, or other soluble chlorides. The chlorides of copper, however obtained, are treated according to this invention in the following manner—that is to say, the said chlorides (taking the chloride of copper as an example) are first dissolved in water, and a due proportion of magnesia, lime, magnesian limestone, or any other earth, or alkaline earths, is to be added to the solution, which it is better to heat, so as to promote decomposition; and, should magnesia be used, it will be found that 20 parts by weight will be sufficient to decompose, in the manner herein described, about 68 parts by weight of dry chloride of copper. In this instance, there will be a precipitate of oxide of copper formed in the pan, or apparatus in which the chloride may have been dissolved, and magnesia added; which oxide is to be removed, to be subsequently smelted, and the clear liquor being drawn off into another pan, or any other convenient vessel, and evaporated to dryness, it will be found, that the residue of the evaporation is a chloride of magnesia, from which chloride hydrochloric acid, may be obtained, according to the process described in the patent of 19th February, 1847, as hereinbefore mentioned.

In the before-described improvements in the process of smelting copper and other ore, with the exception of silver, only oxides have been obtained; but, as oxides of the various metals are also found in Nature, it should be understood, that, in the following parts of this invention, either oxides produced artificially, according to the method or methods herein-before described, or those oxides or carbonates naturally found, can be used, as the case may be. Reducing oxides to the metallic state, may be effected as follows:—Take a common reverberatory furnace, of the kind generally adopted in smelting-works, without any difference whatsoever; and, when the oxide has been obtained from a sulphuret, or is otherwise mixed with silica and other earths, generally found in combination with ores, said silica and other earths, having, by sifting, been brought to certain relative proportions, calculated to render the slag already fusible, proceed to the reduction, in either of the following ways:—Firstly, the complete separation of the metallic matter being, in a great measure, dependent on the fusibility of the slag, in this first mode of smelting, the fusibility of the said slag is to be augmented, but without rendering the slag soluble; and, for the said purpose, mix intimately, with 25 cwts. of desulphurated ore of copper or other metals, containing about 20 per cent. of copper or other metals, about as much of powdered anthracite coal, or any other carbonacious matter and soluble silicate of soda or potash, in the proportion of 4 parts to 10 of the silica contained in the above 25 cwts. of desulphurated ore, and expose the mixture in the smelting furnace to the temperature required to fuse copper or the other metals respectively—stirring from time to time the material, principally when brought into fusion, which will occupy four or five hours; and, by means of the addition of the above-named proportion of silica, or a little more or less of the same, it will be found the whole of the slag has been converted into glass, of a great fluidity while in fusion, and that the metal has gathered into a mass at the bottom of the smelting furnace: the slag may now be run off, as usual, into pigs, or any other form in which such glass may be rendered available; and the metal is afterwards allowed to run in the usual way, into moulds of sand or otherwise. Secondly, proportions of alkali, in its chastic or carbonated state, may be used, as shall not only be sufficient to render the slag very fusible, but to obtain a soluble slag—the proportions of carbonacious matter remaining the same; and, in this case, the quantity of alkali to be used with the ore previously desulphurated, must be, at least, equal to that of the silica and other earths, taken together, contained in the ore; and the said mixture of alkali and ore is afterwards to be treated as hereinbefore described—under the first mode of smelting: but the slag thus obtained, being soluble in water, must be afterwards dissolved, so as to obtain the alkali combined therewith, by the usual process of evaporation; but the first mode of smelting copper, or other ores, is greatly preferred, as being the most economical. In reference to the pure oxides obtained from sulphates or chlorides of copper, or other metals, treated as hereinbefore mentioned, their reduction is as follows:—First prepare a flux, by mixing intimately together about 100 parts (by weight) of powdered anthracite, or any other carbonacious matter, and 100 parts of fluor-spar—the fluor-spar being sometimes dispensed with—and 100 parts of silicate of soda, containing, at the most, 20 per cent. of alkali, and mix the said flux, so composed, with 100 parts of the said pure oxides of copper, or other ore, and proceed to the smelting, in the manner hereinbefore described. The reduction of silver, when mixed with silica and other earths, and of the pure oxide—and, indeed, of other metals, according to the description given for obtaining copper, it is wished to be understood, that, when this process shall be applied to the reduction of other metals—for instance, for obtaining from certain iron ores a finer kind of iron, or more malleable—all before said of copper is to be applied to the reduction of other metals; but, according to circumstances, the quantities, and also the proportions of materials, or the apparatus, may be varied more or less, so long as the true spirit of the invention is adhered to.

The patentee declares, that he claims as his invention for smelting copper and other ores—firstly, the several methods of obtaining oxides of copper, or of the other metals, freed from sulphur, in and after the manner hereinbefore described: secondly, the mode, or modes, of obtaining oxides of copper, or of the other metals, from the sulphates or chlorides of the said metals respectively, in and after the manner hereinbefore described: thirdly, the mode, or modes, of obtaining silver from its chlorides, in the manner hereinbefore described: fourthly, the method, or methods, of fusion, also hereinbefore described.

Patent-office and Designs Registry, 210, *Strand*, *Oct.* 18.

IMPORTANT TO MINE OWNERS.

COMMITTAL OF TWO EXTENSIVE COALMASTERS ON A CHARGE OF FELONY.—William Raybould and William Salter, the well-known lessees of the Heath, Lowisham, and Victoria Collieries, West Bromwich, were brought up at the Wolverhampton Pubic Office, on Friday, the 15th inst., on a charge preferred against them by Mr. Elisha Caddick, solicitor, of West Bromwich.—Mr. Bolton, of Wolverhampton, appearing for the prosecution, and Mr. E. Wright, of Birmingham, for the defence.—In opening the case for the prosecution, Mr. BOLTON said that the charge against the defendants was one of having feloniously taken a certain quantity of coal from land belonging to Mr. Caddick, the offence being laid as a felony under the statute 7th and 8th George IV. After detailing the circumstances of the case, Mr. Bolton produced a plan of the workings, and called Mr. Joseph Cooksey, surveyor and mine agent, for the purpose of verifying it.—Mr. COOKSEY could vouch for the accuracy of the plan, as a surveyor of the workings of the Heath Colliery, and of the property of Mr. Caddick—the latter of which is surrounded on three sides by the other. He then proceeded to explain the plan, from which it appeared that various gate-roads and side-workings had been driven through Mr. Caddick's property by the defendants, and coal taken away, estimated to amount to about 945 tons. In cross-examination, he admitted that no difficulty had been thrown in his way by the defendants on his proceeding to survey the pit. He was aware that encroachments, such as the present, were of frequent occurrence, and also that the system of latching was often disputed.—Mr. E. CADDICK was then called—he said that he was the owner of buildings and land at West Bromwich, as described in the plan, all of which had been in his occupation since he first possessed them, which was 13 years ago, and before the defendants had sunk the workings referred to. About seven weeks since witness sent for Mr. Raybould, and took him through the house and showed him certain cracks in the walls, and broken windows. Mr. Raybould said it was very strange, and expressed his belief that it was caused by the giving way of the sandy foundations; and on witness saying his opinion was that they were getting coal from under the house, Mr. Raybould declared they had never got near his property. Witness told him he should wish to send down to satisfy himself; but Mr. Raybould told him he need not put himself to the trouble, as he was confident they were yet at a distance from it, and would inform him if they approached. About a week ago, witness found the house was still more endangered, and he went to Mr. Raybould, and asked to get down the pit, when he was told that, the Earl of Dartmouth's mine agent was coming shortly, and would look into the matter, but was again assured that there was nothing wrong. He was afterwards told, that if Lord Dartmouth's agent did not come on a certain day, Mr. Skidmore, a mine agent, should be allowed to go down the pit to satisfy his fears. Previous to the day of appointment witness received a note from the defendants, in which they stated that a clause in their lease prevented any one descending the pit for the purpose of examining the works; and in consequence of this, he went on the following day to the pit along with Mr. Skidmore, and produced the Act of Parliament for the West Bromwich Enclosures, by a clause of which any parties having allotments were authorised to go down any pit. Having told Mr. Salter that he claimed it as a right for Mr. Skidmore to go down and examine the workings, Mr. Salter assented, and Mr. Skidmore went down.—In cross-examination, Mr. Caddick said that the extent of his property was about three-quarters of an acre, and that the house had cost him nearly 3000*l.* He denied that he had made any overtures on the subject of compensation, nor had any negociations taken place with his knowledge or authority. Mr. Skidmore, however, had told him that the defendants were anxious for him to interpose to try to settle the matter, as they were aware they had done wrong—witness had declined doing anything of the sort. In answer to a question by Mr. Bolton, Mr. Caddick said the defendants had made no application to treat for purchase or otherwise.—ISAAC WHITE, formerly ground bailiff to the defendants, was then called; and on reference being made to certain working plans which he had executed while in their employment, of which notice for their production before the magistrates had been given to the defendants by the prosecutor, it appeared that they refused to show them: his examination was proceeded with, however. Witness stated that he had succeeded a person named Hunt in the situation of ground bailiff, and was aware almost from the first that gate-roads had been driven through Mr. Caddick's property, as marked in the plan made by Mr. Cooksey. One of the gate-roads there described was about being closed up when witness went to work in the pit; but while he was there another had been driven in the same locality, which also went through Mr. Caddick's property—he had done so under the direction of the defendants. His working plans were frequently seen by the defendants, and he had told them of the encroachments which they were making on Mr. Caddick's land, when they replied that they would buy it, and told him to go on, saying they would make it all right. This working had continued for some time; the coal was of the thick kind, and was of good quality. In cross-examination, witness said that Mr. Bayley, Lord Dartmouth's agent, generally inspected the working plans when he visited the colliery, but he could not recollect that anything had ever been said regarding the coal being taken from Mr. Caddick.—The next witness called was GEORGE MACDUFF, who had been working in Messrs. Salter and Raybould's pits for 41 years, and who was a doggy under White. His evidence only went to show that the defendants had almost from the beginning of the operations a knowledge of the encroachments making on Mr. Caddick's property.—It appeared, at this part of the proceedings, that Mr. Bayley had been summoned as a witness on the part of the prosecution, but on being called he did not appear.—An adjournment of the case was spoken of, in order that he might be brought upon a warrant; but, after a short consultation with his brother magistrates, Mr. LEIGH said, that the impression on the minds of the bench was very strongly against the accused parties, as to their having had a guilty knowledge of what was going on. He had, therefore, to ask them what they had to say why they should not be committed on the charge contained in the information.—Mr. WRIGHT then addressed the bench, and alluded to various points in the evidence which he considered tended to show that the defendants had no felonious intentions in the encroachments they had made.—Mr. LEIGH, however, said, the bench still were of opinion that the case was conclusive enough to warrant its being sent before a higher tribunal. Without doubt it was a very unusual prosecution, as hitherto such cases had been treated as an injury to civil rights, and actions were laid accordingly; but the circumstances were such, that it was impossible now to dispose of it in any other way than that now determined upon. The defendants were, therefore, committed to take their trial at the next assizes, but in the meantime admitted to bail on their own recognisances in 100*l.* each. A warrant was also granted to apprehend Bayley, as it appeared that he had behaved in a very violent manner to the constable, when the summons was served.

RAILWAY PROPERTY AT A DISCOUNT.—At the sale of the effects of a Mr. C. A. Caddy, at Barnstaple, last week, 50 shares in the Taw Vale Railway, upon which 2*l.* per share had been paid, were sold for 1s. per share; and 100 shares in the Cornwall Railway Company, upon which 7*l.* per share had been paid, were also knocked down at 1s. per share.—*Plymouth Times.*

THE VACUUM ENGINE.—Having, in the *Mining Journal* of the 18th Sept., given a concise description of the system of pneumatic propulsion, as patented by Messrs. CUNNINGHAM and CARTER, and having heard considerable objections started to the vacuum engines, which form the basis of their plan, we now offer a few remarks thereon, hoping thereby to call the attention of others to their merits much better qualified than ourselves to appreciate and describe them. Our readers will remember that the pneumatic railway consists of a close tube the entire length of the line, without any continuous valve, or opening, of any description, excepting at the slide valves, in connection with the vacuum engines, placed at every 300 ft. The engine, itself, consists of merely a cylinder and piston, with double slide valves—the atmosphere thus alternately pressing on either side of the piston, when the communication with the exhaust tube is open, precisely similar to the action of steam in a high-pressure steam-engine. Now, in the high-pressure engine, the induction openings are so small, in proportion to the area of the piston, that the steam is actually wire-drawn, and then cut off at, perhaps, half the stroke, for the purpose of economising fuel, and taking advantage of the property of the expansibility of steam—and thus the power is admitted, but gradually, compared with what it would be, if the induction valves were (say) of four times the area. Now, in these vacuum engines, the element employed being inexhaustible, and supplied by Nature without cost, the areas of the openings for the action of the atmosphere on the piston, when the connection with the exhaust tube is open, are made as large as consistently proportionate with the area of the piston itself. The consequence is, that, instead of the atmosphere creeping through a small opening, and acting only by degrees on a large surface, the whole pressure, according to the state of the vacuum, is admitted with a sudden impulse, and thus adds considerably to the calculated power obtained. One great, and we believe the principal, objection made to, the system, has been, "that no piston rods and cranks, however strong in proportion to the size of the cylinder, can withstand the sudden shock of a removal from their *vis inertiæ*, or state of rest, to that of rapid motion, by a train going at a rate of 30, 40, or even 60 miles per hour." Now, this would be a very valid objection, were the wheels connected by cogs, or was the machinery in any degree of a complex nature; but, in this case, the rails of the carriages being wedged close between the revolving wheels, with plane peripheries, and these being on the crank shaft, and thus the whole bound firmly together; while, on one hand, the instant the connection with the tube is open, the crank is certainly suddenly set in motion with great rapidity—on the other, the train itself acts almost in the capacity of a fly-wheel, and keeps the moving power itself properly regulated: in addition to which, it must be remembered, that there is no enormous weight, such as a train of 90 or 100 tons to set in motion; the only bodies to start from their *vis inertiæ*, being the three horizontal wheels and the piston, and these are *gradually* brought into action by the peculiar form and position of the guide rails. The model, at all events, works well, creates much interest, and gives great satisfaction to numerous scientific men, who witness its performance; yet it would be highly satisfactory to all parties, and at once solve the problem of its capabilities, if about a mile of a railway could be obtained, where the principle could be fully tried. Although the nature of the vacuum engine is, of course, well known; we are satisfied, from its never having been brought into any general use, that its powers and capabilities, as applicable to railway purposes, in all their important bearings, and as a peculiarly powerful auxiliary for safe and certain operations at stations, have yet receieved but little investigation.

ACCIDENTS.

Ardwick Iron-Works, Manchester.—A very serious accident occurred here on Monday last, which was attended with fatal consequences. A number of iron girders had recently been cast for the Lime-street Station of the London and North-Western Railway: several of them, weighing 6 tons each, were lying beneath a large and powerful crane in the yard—the principal support of which was a girder, 12 inches square, and 36 feet long, supported by two powerful uprights, and strongly trussed with wrought iron; and on this was a travelling windlass, for the purpose of hoisting any heavy bodies within the distance of the uprights. It being necessary to remove the six girders, five men were on the top, about 20 feet high, and several below: in removing the first, it was found necessary to rest one end on packing, or blocks of wood, which having been improperly done, it slipped on one side, and the sudden jerk, with 6 tons hanging to the chain, snapped the girder in the middle, and, of course, brought the whole machinery to the ground, with the men on it. One of them, Martin Fairhurst, clung to the handle of the crane, and escaped; but the other four were so severely injured, that one of them, James Mason, died soon after being taken to the infirmary; and the other three, P. Connor, T. Bolton, and J. Mahomet, lie without much hope of their recovery. The men below, most fortunately, slipped on one side in time, and escaped injury.

Black Diamond Colliery, near Auchincruive, Ayrshire.—An explosion of fire-damp, which, it is feared, may prove fatal to one of the sufferers, happened in this pit, belonging to J. T. Gordon, Esq. Three men and a boy—John Vance, and his son James, Francis Dickson, and William Winders—were very seriously burnt.

Londonderry Colliery, Durham.—T. Aisbett, while driving a horse, to which were attached nine rolleys, laden with coals, for some purpose got off the rolley on which he had been riding, when he got crushed against the wall. The coroner's jury recommended the widening of the pit, to prevent the possibility of future accidents.

Merthyr.—J. Price, while engaged tapping cinders, being left by his companion, it is supposed, laid down, and became unconscious, from the exhalation of sulphur: when found, he was quite dead, the lower part of his body being dreadfully burned.

Waunmyllt Colliery, Merthyr.—As Mr. W. Thomas, and several companions, were engaged sinking a pit on the Graig Farm, a hole was made for a blast, which the fusee, apparently, failed in igniting. The workmen returned to make an examination, when it exploded—severely maiming the unfortunate men—two of whom (Harris and Lewis) have since died, and a third lies in a very precarious state.

Cwmdu Colliery, Cyfarthfa.—T. Rees, aged 12 years, being sent by his father to another part of the pit, to fetch some tools, it is supposed, meddled with some unsound work, when it fell, breaking his leg, and otherwise injuring him.

Westhoughton, near Bolton.—As P. Hilton, aged 12 years, and another boy, S. Gill, were removing a post, at Mr. Hutton's Colliery, Gill caught Hilton on the head with his pick: he followed his work for a few days, but inflammation ultimately ensued, and he died. The pick, it appeared, had penetrated the skull, so as to touch the brain.

Hart's Hill Colliery.—A little boy, named Woodcock, who was taking his father's breakfast, at Messrs. Ixon and Co.'s, and, while stooping over the pit, to place the food in the skip, the poor little fellow lost his balance, and was precipitated to the bottom of the shaft—being literally dashed to atoms.

Oak Farm Works, Brierley Hill.—An accident, which might have been attended with much more serious consequences, occurred last week—fortunately, while the men were unemployed. It appears that the beam crossing the roof of the forge suddenly gave way—falling upon the machinery beneath, and causing considerable damage. Had the men been engaged in the forge at the time, the loss of human life would have been fearful.

Walker's Patent Shaft-Works, Wednesbury.—As W. Davis was throwing off the gearing of a wheel, which worked a small mill (the steam-engine being in motion at the time), when, placing his foot upon a revolving shaft, he was thrown into a hole close by, in which a crank worked, and, doubtless, instantly deprived of life, as, on his being taken out, he was mangled in the most shocking manner, and quite dead.

Middlesbro'-on-Tees.—As a lad, at Messrs. Bolckow and Vaughan's Iron-Works, was lifting one end of a bar of iron, to be cross cut by the circular saw, his tongs lost their hold, when he fell over on the saw. His jaw-bone was cut through, and a most awful gash made on his left breast, about 12 inches long, cutting through all the ribs, and terminating on the left side. Little hopes are entertained of his recovery.

Shelver Colliery, Oldham.—As W. Crossley was ascending from his work, he was suddenly seized, when near the top, with a fit, and fell out of the ascending tub, unperceived by his companions, falling to the bottom of the pit—he died immediately.

Abercannad Colliery, Merthyr.—D. Lewis was seriously injured by a fall of rubbish.

Bolton.—W. Downs, aged 12 years, was killed by falling from the ladder, while descending one of Mrs. Nightingale's coal pits.

Shrubbery Iron-Works, Wolverhampton.—While Thos. Groves, a bricklayer, aged about 70 years, was at work, a plate of iron, weighing nearly 3 tons, fell upon him, and broke his back-bone and four of his ribs. The poor man was stooping to lay some bricks, the iron plates being reared on an end almost upright near to him. A plate fell upon him, and literally broke his body, so far as his bones were concerned, into two. The sufferer was promptly conveyed to the Dispensary, where he now is, but without the slightest hope of recovery. Three other men were injured, but not seriously.

Parkfield Colliery.—J. Cuirnon was killed by a brick falling upon his head.

Dowlais.—R. Davis, aged 10 years, was killed while working in a colliery.

Darlaston.—J. Wall was killed by a fall of stone, in the colliery of Messrs. Bills & Mills.

Preston Grange Collieries.—A fatal accident occurred, on the 9th inst., to Mr. R. Moore, manager of Sir G. Grant's collieries: he was crossing the top of the boiler, when his foot slipped, and he fell into the ash-pit, which had, just before, been filled with boiling water from the boiler. He was dreadfully scalded—had one arm broken—and, after suffering severe agony, died the next day.

Lees Hall Quarry, Longtown.—James Ferguson, quarryman, met with a singular death here: he had a deep wound on his right leg, and was standing under the crane, while a companion was widening a link with a pair of blacksmith's tongs; they slipped from his hand—struck Ferguson's bad leg, and ruptured one of the large blood vessels, which bled so freely, that he was a corpse in 10 minutes.

Wharfe Viaduct, near Otley—Fatal Accident.—This viaduct has been nearly 18 months in course of erection, and was near completion: when, unfortunately, on Tuesday last, the seventh arch, which spanned the river, fell with a tremendous crash, when several men were upon it; a young man, named James Verity, was killed on the spot, and another, named Drake, was buried in the ruins, and died soon after being extricated—several others are severely injured. It was a noble structure, and the arches are of an enormous height.

Oldham.—John Mills was killed by an explosion of fire-damp in a coal pit.

A DISEASE OF THE CHEST AND A LONG STANDING COLD CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Mr. James Kilroe, clerk to Mr. M'Laughlin, proprietor of the Castlecoote Mills, Roscommon, caught a most dreadful cold, from which he suffered for several months; and though he received the best medical advice, yet nothing prescribed afforded him any relief, and fears were entertained that the disease was terminating in a confirmed affection of the lungs, whereupon he resolved to try Holloway's ointment and pills, and these unparalleled medicines for the cure of colds, coughs, and asthmas, shortly effected a perfect cure, after so many other means had failed. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We hope to hole the Slob shaft to the 18 fm. level this day, by boring 4 fms. in the bottom of the shaft—it is sunk 12 fms., and the rise is up 2 fms.; we have a part of the lode in the shaft mixed with lead, about 2 ft. wide; in the rise the lode is large, and mixed with lead, worth about 8*l.* per fm.; in the winze, sinking behind the 18 fm. level west end, the lode is about 1 ft. wide, and worth about 8*l.* per fm.; the stopes, east and west of this under level, are worth 10*l.* per fm. Doyle's stopes, under the 18 fm. level, are not looking altogether so well, worth about 10*l.* per fm. The back of the 12 fm. level is looking well, worth from 16*l.* to 20*l.* per fm. The water has fallen at Nangle's about 8 fms.; we have a party of tributers working on the backs there, breaking a fair quantity of ore; the stopes, on the middle lode, under the 12 fm. level, are worth about 8*l.* per fm. We have holed a cross-cut to Kiln shaft, in the 18 fm. level, and discovered a part of the lode standing there, about 1 ft. wide, mixed with lead and gossan; this is about 6 fms. south of any of our previous workings.—Oct. 15.

BEDFORD UNITED.—At Wheal Marquis, the lode in the 90 fm. level east is worth 60*l.* per fm.; in this level west the lode is worth 30*l.* per fm. In the 80 fm. level east the lode is 2½ ft. wide, good work; in the western winze, in this level, the lode is unproductive. We expect to complete cutting plat by the end of this week. There has been no lode taken down in the 70 fm. level east; the lode in Harvey's winze, in this level, is 2 ft. wide, producing good stones of ore—a kindly lode. The lode in Hooper's rise, in the 58 fm. level east, is 15 in. wide, spar, mundic, and ore. At Liscombe, there is no alteration in the adit level, east of rise, in this level. The lode in the 25 fm. level, east of the south engine-shaft, and in the adit level east, is producing good stones of ore. One parcel of tin ores, sold the 16th inst. (6 tons 7 cwts. 3 qrs. 10 lbs.), realised 261*l.* 2s. 11d.—Oct. 19.

CALLINGTON.—Kelly Bray engine-shaft is 2 fms. below the 35 fm. level; the surface water has now found its way down, and operations are suspended here for the time; the men are now engaged fixing footway, dividing, casing, &c.; we expect to resume sinking the shaft soon, as the necessary preparations are complete for doing so, such as the above work, fixing penthouse, &c., in order to take up the water in the 35, having cut the lode in this level, through which the water is all passing away; the lode appears to be large, we are not yet through it, composed of quartz, mundic, and spots of copper ore, carrying large capel, of a very promising character. The water being in the winze, sinking below the 25, we have stoped the same, and commenced driving west; the lode has not been taken down. The stopes in the 20 continue orey, the lode being 4 ft. wide; the men have discontinued working—so much water going over the stopes, is carrying off the copper (being of a light nature, black oxide) in solution; we have met with different branches of this lode in the 40 fm. level, north mine, and now calculate on having the main parts; it is from 2 to 3 ft. wide, intermixed with mundic and spots of copper ores, not yet clear of the cross-course, and rather disordered. In the 50, on this lode, the ground is favourable for driving; we soon expect to cut the great cross-course, rising in the back of the 70 fm. level; the lode is nearly 4 ft. wide, the orey part, 18 in. big, is good work; in the end the lode maintains its size and character, not so rich as we have seen it, producing good stones of copper ores. In the 100 fm. level south we are opening good tribute ground, and expect to cut the Kelly Bray lode in a day or two; in the north end the lode is producing work of a moderate quality. The 90 fm. level south is opening tribute ground; in the north end the lode is poor. In the 70 north the lode is producing silver-lead ores. In the 125 fm. levels, both north and south, we are opening tribute ground. In the 112 south the lode looks more promising, not taken down. In the 100 and 90 fm. levels north we are opening tribute ground. The foundation for the boiler at the north mine is cleared out, and no time shall be lost on our part in getting her to work.—Oct. 18.

COATLITHE HILLS.—A great alteration has taken place here since I last wrote. In the beginning of the week the vein was looking better than I have seen it before, producing at the rate of ½ ton of lead ore per fm., when we unexpectedly cut into an old level, driven on the course of the vein, in which we are now driving; we explored about 5 fms. of the old level, but could get no further—I expect to let you know more particulars next week. The horse level men have risen up about 3 fms. in the limestone, and, in a day or two, will commence driving towards the shaft from the top of the rise.—Oct. 16.

COMBLAWN.—We have forked the water in the engine-shaft; this shaft is now sunk 13 fms. 3 ft. from the surface; and, should the ground continue as at present, we shall be enabled to get down the shaft 20 fms., and intersect the lode in about four months from the time we recommence operations. The water is also in fork in the shaft on the north lode, in the lower mine, where the lode in the sink in the 7 fm. level is about 1 ft. wide, carrying a branch of lead on the foot wall from 4 to 5 in. big; from this branch were broken the two largest stones of lead in the box forwarded to you by this day's coach, from Devonport, with some smaller stones, broken in the shaft on the south lode, in the higher mine, where we have a very promising lode also, 2 ft. wide, but on this the shaft is only sunk 15 ft. The two largest stones of lead, before mentioned, were broken by Captain Seccombe, when he last inspected the mine; the branch is increasing in size.—October 18.

COOMBE TIN MINE.—The stopes, west of Jeffry's shaft, in the back of the adit level, is worth 20*l.* per fm.; the stopes, in the back of the adit, east of Jeffry's shaft, is worth 15*l.* per fm.; the present end, in the adit level, is worth 10*l.* per fm. Hayman's winze, in the bottom of the adit, is worth 21*l.* per fm.; the lode in the winze is from 4 to 5 ft. in breadth, underlaying about 2½ ft. in the fm.; the lode in the present end, in the adit, is from 5 to 6 ft. in breadth, composed of capel, peach, spar, and tin; everything bespeaks of a return quantities of tin. There is a good lode in the bottom of the adit, upwards of 100 fms. in length, worth as much as the lode is in the back, on the south tin lode; there is stones of tin raising, of a very superior quality; this lode is about 2 feet in breadth. It is supposed that the main and south lodes will come together about 10 fms. in depth, where it may be expected we shall find a real good lode. About 50 fms. south of the tin lodes, we have a copper lode, 3 ft. breadth; we have not commenced driving on this lode, but have costeaned on the back, where we find it produces a very fine gossan and copper ores of a very good quality. We are now about to drive the adit level; I should think it would be well to sink an engine-shaft as soon as possible. I have every reason to believe, as soon as we can get 10 fms. deeper, we shall have a very fine mine for tin.

CUBERT SILVER-LEAD.—In the 35 fm. level west, the lode is pretty much the same in size as it has been for some months past, averaging from 2 to 3 ft. wide, and producing some large stones of lead; east, in this level, the lode is 1 ft. wide, very rich for mundic, with soft spar, and a little lead. In the 25 fm. level west the lode is in a disordered strata, and split into two parts—together, about 18 in. wide, soft spar, mundic, and some good saving work; the eastern end, in this level, is suspended—the men being employed in the bottom levels. In the 15 fm. level west the lode is 18 in. wide—saving work, but not rich. The tribute is much the same as last reported. We sampled, on Wednesday, 46 tons of silver-lead ores, to be sold on Thursday next.—Oct. 16.

DEAN PRIOR AND BUCKFASTLEIGH.—We are making all the progress we possibly can to carry out the surface work in all its branches—we have fixed the arms, and nearly fixed the rings, of the 40-ft. water-wheel; the masons have commenced building the walls in the wheel-pit for the 24-ft. wheel; while, at the same time, the men are engaged making all the necessary preparations in all its branches—that is, excavating for balance bob, and also for the horizontal rods near the wheel-pit; and we have four men making the preparations underground in order to turning the engine-wheel idle, for changing the gear, pit-work, &c. There is no material alteration in the lode in the 20 fm. level, east of engine-shaft, since my last report. I shall be prepared to state, as to the quantity of copper ores dressed, and put to pile, by Wednesday next.

DEVON AND COURTENAY CONSOLS.—The lode in the 80 fm. level, driving west, is 2 ft. wide, composed of branches of mundic and stones of copper ore. In the deep adit level the lode is 2 ft. wide, 1 ft. of which is composed of flookan, soft spar, and lead ore, saving work; the other part is coarser, containing spar and spots of copper ore. In the shallow adit level, driving east, on the north lode, the lode is 1 ft. wide, composed of flookan, spar, mundic, and spots of copper ore. The lode in the stopes, east of the flat-rod shaft, is 1 ft. wide, producing some good saving work. The pitch, in the back of the shallow adit level, on the north lode, continues to look well. Through the intervention of some layers of spar, in our engine-shaft, there has not been so much ground sunk this week as in some previous weeks.—Oct. 19.

EAST ALVENNEY.—The lode in the bottom of the shaft still holds good, and is certainly improving; the ground is more kindly, and looks more likely to continue than I ever saw it before—it is softer for sinking, being of decomposed granite, and, on the footwall of the lode, there is a beautiful elvan, which speaks very largely—this is just the thing I have been anxious to see. I think we may now conclude we are on the eve of receiving, instead of paying. It will take us about 40*l.* monthly for the time to come; and, if the lode continues as at present, there will be sufficient tin raising, in sinking the shaft only, to double pay all our costs, without stoping, which we ought not to do before our shaft gets 10 fms deepor; we shall then have backs to give good dividends, even if the lode continues only half as good as it now is. There is a captain from Penzance coming to inspect the mine this day; there is a rich lode for him to look at, and two chests full of the richest tin he ever saw, I will warrant, and our stamps' work is splendid; the lode is more than 3 ft. wide—there are three branches running through it, and the little veins are crossing each other in every way between the north and south branches; the little veins are quite solid, and they appear to grow large as they go down. What this is to end in, I cannot say; but it is at present a most splendid lode.—Oct. 20.—Since I last wrote, the lode has continued to improve; the branches are good all the way across the shaft, of which there are three: the north branch is more than 2½ in. solid tin—the south 1½ in.; and there is a solid branch running through the middle of the lode, more than an inch in thickness. The lode is 3 ft. 6 in. wide, and the whole of it is crossed by runners and branches intersecting each other—all solid tin, about the size of quills. There are scores of small branches, and independent of the larger branches, which need not go under the stamps. The whole lode is good saving work.—Oct. 21.

EAST CROWNDALE.—We have commenced driving north, in the 47 fm. level; the ground is rather stiff, there being several small branches of spar mixed up with the killas; these branches continue to produce good stones of ore—in fact, the whole of the shaft produces good spots and stones of ore; these are good indications, and I fully expect, that, when the lode is cut, we shall begin to make good returns. The lode in the adit level, at Rix Hill, continues to increase in size, and the appearance is altogether favourable; it is upwards of 2 ft. wide, composed of spar, capel, killas, and spots of tin, intermixed with peach. The lode in the shaft, sinking below the adit level, is not quite so good as I expected, there being floors of killas, which has rather disordered it; it is 4½ ft. wide, composed of peach, capel, spar, killas, and a leader of good tin—work 15 in. wide. We have commenced cross-cutting, to intersect the south lodes in good killas ground; and I hope, in about a fortnight, to report the middle lode being cut. Our engine and pitwork in good order.—Oct. 18.

ELBOROUGH.—The lode in Chapman's shaft is rather smaller than it has hitherto been—being now about 2 ft. wide, carrying two regular walls, and is composed chiefly of barytes, intermixed with carbonate of lime, calamine, and good stones of lead. The indications are good.—Oct. 18.

GREAT MICHELL CONSOLS.—The lode in the sump winze is not so good as it has been, although it is about the same width (5½ feet), and producing saving work. In the 35 fm. level, west of the sump winze, the lode, for the width of the end, is carrying abundance of mundic, with ore intermixed throughout, and producing some saving work. In the 35 fm. level, east and west of the engine-shaft, there is no important alteration; these ends are at present suspended.—Oct. 19.

GREAT WHEAL MARTHA.—In driving east, in the 40 fm. level, we find the lode continues about 5 ft. big, and is at present more promising than we have found it since the commencement of this level—2 ft. of the lode consists of spar, containing mundic and copper; the remainder of the lode is capel, intermixed with mundic and copper. We may expect further improvements, as, from the distance driven, we are getting nearly under the shoot of ore, going down from the 10 and 20 fm. levels; but, if the shoot should be dipping east, we shall have somewhat further to drive before meeting with the same; the ground is rather harder. In the old mine, we have twice the increase of top water. We have decreased the shaft water to 6 fms. below the 70; and, without any accident, we expect to fork to the 80 by Monday next.—Oct. 16.

HOLMBUSH.—The diagonal shaft is sunk 12 fms. below the 120 fm. level, the ground in which is still favourable; we intend (as we have previously intimated) to sink 15 fms. below the 120, and then cross-cut south to intersect the numerous branches that have passed through the shaft by their underlie in that direction. In the 120 fm. level, west of the great cross-course, in our last report, we thought we had reached the slide; but, on extending the level a little further, we found that four or five small cross-courses had formed a junction at that point, which rendered the ground softer; the present end is still in this disordered ground, and cannot be far from the slide. The lode in the 110 fathom level south is 2 ft. wide, composed of fluor-spar and stones of lead; ground so favourable, that six men can drive about 10 fms. a month—at this rate, three months hence will bring us under the bunch of lead we have driven over in the 100 fm. level, which, at the present time, is so desirable to reach. The lode in the 100 fm. level south is 4 ft. wide, composed of spar and strings and stones of lead scattered through it, worth 5*l.* per fm.; one of the pitches in the back of this level is rather improved, the other pitch is not so productive. The lode in the 90 fm. level south is 2½ ft. wide, composed of flookan, spar, and stones of lead. The present position of these three levels—viz.: 90, 100, and and 110—judging from the nature of the ground in each, will intersect the flap-jack lode just at one time; and, should we be so fortunate as to meet with a productive lode, you cannot but perceive the advantageous position we are in to make returns therefrom, not forgetting the 80 and 60 fm. levels south, which might be resumed at will and pleasure, and within 12 months reach the same lode.—Oct. 19.

ILAM.—The air in the bottoms is so bad, that we have been compelled to suspend sinking; having, however, put down air pipes, it is to be hoped we may resume working. The lode in the end, driving to the north of Robins' lode, is just the same as when I wrote last—being small and poor. I do not expect to see much alteration in the end before we cut the perpendicular lode. The 67 fm. level, east of Robins's shaft, is still large, but not much ore; there is about 4 fms. of water in Robins's shaft—not having been able to draw any water, with our present means, from the air being so bad.—Oct. 16.

KIRKCUDBRIGHTSHIRE.—But little has been done in the 50 end west since the last report, as these men have been engaged fixing a 20-fm. drawing lift—viz.: from the 50 to the 30 fm. level—which is doing well. The lode in the 40 end is opening wider north, producing half a ton per fm.; from indications, we calculate that we are near the caunter, seen in the 30 fm. level; the backs, in this level, look much the same as last reported. The lode in the 30 end is large—in fact, we cannot say how large; it produces, on the part on which we are driving, 1½ ton per fm.; the rise, in the back of the 30 fm. level, looks much the same as last reported; the same may be said of the stopes, in the back of this level; the stopes, in the bottom of this level, also look well. The lode in the 20 end west is 4 to 6 ft. wide, rather poor; the stopes, in the back of this level, are producing about three-quarters of a ton per fathom; the winze, sinking under this level, is producing a similar quantity; the stopes, under this level, look well. In Keith's shaft, in the 75 fm. level, west of Stewart's, the water is very quick, and we have not succeeded in finding the lode; we are now driving south on the rock in search of it. On the 13th inst., we shipped 44 tons 4 cwts. of lead ore for the market as usual.—Oct. 16.

LEWIS.—The lode in the engine-shaft, sinking below the 60 fm. level, is still in a disordered state; the south part, about 1 ft. wide, produces a small portion of tin. The lode in the 60 end, east of tin shaft, is 3 ft. wide, worth 7*l.* per fm., and very promising; the ground in the cross-cut south, from sump whim shaft, in the 60 fm. level, is favourable. The lode in the 50 east, on south branch, is 10 in. wide, worth 12*l.* per fm.—very kindly. The lode in the 30 end east is 2 ft. wide, worth 3*l.* per fm. The lode in Praed's shaft, sinking below the 20 fm. level, is 2 ft. wide, producing some tin, and very promising for a good improvement as it goes east from the flookan. The lode in the 10 fm. level end east is 1 ft. wide—set to drive at 10s. tribute. The tributers in the back of the 50, east and west of tin shaft, and east of copper-ore shaft, have raised some good parcels of work with the tributers in the back of the 50, on south branch. I think our prospects are very encouraging.—Oct. 16.

LOSTWITHIEL CONSOLS.—We have just opened upon a branch, about 5 fms. behind the end, which we find to be widening and improving; it contains spots of ore, and is a fifth lode from the engine-shaft. I have also to tell you, that some argentiferous ore, assayed last week by a gentleman at Lostwithiel Royal Restowal Mine, for his own pleasure, produced 273 ozs. of silver per ton—value upwards of 50*l.*; it was taken out of the back of the level, above the before reported indications of ore in depth.—Oct. 16.

MENDIP HILLS.—The lode in the winze, sinking below the 38 fm. level, continues to increase in size, being at present rather more than 5 ft. wide, with two very regular walls, composed of soft white flookan, quartz, and particles of lead. The lode in the end, driving south of shaft, is about 2 ft. 6 in. wide, consisting of flookan, white spar, and limestone. In the slag department I have placed some men to lay open a trench across the eastern part of the valley, in order to prove, as near as we can, what quantity of slags we have in this part. The engineer is progressing favourably with the engine.—Oct. 19.

SOUTH WHEAL TRELAWNEY.—The engine-shaft is sunk (in the 15 fm. level) below the adit level, and at no time have we seen the ground more favourable for sinking, or congenial for mineral, than it is at present; and we are of opinion, should it so continue, we shall reach 30 fms. below the adit in four months, from the end of the present month; after which, we shall drive a cross-cut west, to intersect the lode—when, we hope, good results will follow. The quantity of water is just as usual, and the engine performs her work well.

TAVY CONSOLS.—The lode continues good in the shaft; we have a leader of ore, about a foot wide, of good quality, within about 3 ft. of the eastern end of the shaft, which appears to lengthen as we get down; the ground is also more favourable for sinking; we have taken up stones of ore upwards of 200 lbs. in a stone—so I may say the mine never looked more promising than the present. The other parts of the mine are just the same. No alteration in the bottom level; however, as I wrote you before, we are dressing it, the lode for the present being very hard, and shall cut through it as we proceed. The pitches are much the same. We shall sample to-day upwards of 130 tons of copper ore.

TRELEIGH CONSOLS.—Christoe's shaft, below the 110 fathom level, is sinking in the country; this is below the 110 fathom level 15 feet. In the 110 fathom level, east of ditto, cross-cutting south, we have not seen any more lode as yet, though the end is very wet; in the 110 fathom level, west of ditto, we have a branch; we have commenced driving on in a western direction, but little driven on it. In the 100, east of Garden's, the lode is 3 feet wide, with occasional stones of ore; in the 100, west of ditto, the lode is 2 ft. wide, but little ore—more promising than it has been. In the 90, west of ditto, the lode is 2 ft. wide, rather kindly, but not much ore. In the 80, west of ditto, the lode is 2½ ft. wide, worth 12*l.* per fm.; in the rise, above the 80 west, the lode is 2½ ft. wide, worth 30*l.* per fm.: in the 80, east of ditto, the lode is 2 ft. wide, with stones of ore, not to value. In the 70, west of ditto, we are cross-cutting south 20 fms. east from the present end, in hope of finding more lode. In the 60, west of ditto, the lode is 2½ ft. wide, worth 7*l.* per fm., with a very kindly appearance; the adit, on Wheal Parent lode, is now commenced cross-cutting to the new shaft, and the distance is about 17 fms.; the new shaft for Wheal Parent, is sunk below the surface 11 fms.; the ground is still favourable.—Oct. 16.

WEST WHEAL JEWEL.—In the 57 fm. level, east of Williams's cross-course, on Wheal Jewel lode, lode 1 ft. wide, worth 5*l.* per fm.; ditto west, on the same lode, lode 1 ft. wide, producing stones of ore. In the 30, west of Quarry shaft, on Tolcarne tin lode, lode 18 in. wide, worth 6*l.* per fm. In the 12 fm. level, west of Quarry shaft, on the same lode, lode 18 in. wide, worth 4*l.* per fm. In the adit end, west of Quarry shaft, on the same lode, lode 18 in. wide, worth 8*l.* per fm.; in the shallow adit end, west of Quarry shaft, on same lode, lode 1 ft. wide, producing stones of tin. In the stopes, in the bottom of the deep adit, on the same lode, lode 4 ft. wide, worth 35*l.* per fm.—Oct. 18.

WHEAL MARY ANN.—Barratt's shaft is sunk 3 fms. under the 30 fm. level—the lode now is 3 ft. wide, and worth 12*l.* per fm.; the lode in the 30 fm. level, south of Barratt's shaft, is as was last reported. The plat in the 15 fm. level, in Pollard's shaft, having been completed, the men are now driving in that level south, where the lode is about a foot wide, producing good stones of lead, with gossan and can. All the stopes are looking well. Pollard's shaft-men will have completed their bargain about the pitwork, &c., by to-morrow evening; after which, they will commence sinking the shaft under the 15 fm. level.—Oct. 18.

WHEAL TRELAWNEY.—In handing you the following report of this mine, I beg to say, that our prospects are better than I have ever seen them before. The lode in the 52 fm. level north is 4 ft. wide, and worth, at least, 30*l.* per fm.; in the same level south, the lode is worth 10*l.* per fm. The lode in the 42 fm. level south is large and hard, and worth 12*l.* per fm.; in this level north, the lode is easier than it was, and is worth 12*l.* per fm.; in the winze, sinking under this level, the lode is worth 10*l.* per fm. The lode in the 32 fm. level north is at present small, but tolerably good, worth 8*l.* per fm. Our stopes throughout the mine are producing a fair quantity of ore. The ground, in sinking Trelawney's shaft, and the 22 cross-cut east, is much as usual. At Vivian's, driving from the bottom of the winze north, the lode is similar to the former report. We have not explored so much ground here in the past week as we could wish for want of air; but we shall get an air machine at work to-day, which will enable us to make greater progress in this part of the mine.

GREAT WHEAL MARTHA CONSOLIDATED MINES.

SIR,—My attention having been called to a letter which lately appeared in your Journal, relative to Great Wheal Martha Consolidated Mines, I trust you will allow me space in your valuable paper for a few observations in reply to such an uncalled-for, unjustifiable, epistle. The writer is well-known to me, as is his assistant relative, both of whom might, in my opinion, have employed their time to a better purpose, for such strange truths (evidently penned for interested motives) will be deprecated by every lover of legitimate mining. As a shareholder in this concern, I have often watched, with considerable interest, the operations which have been conducted with that judgment and economy, which no practical miner need be ashamed of; and although I have from the commencement strongly urged on the directors the absolute necessity of erecting efficient machinery, to develope the lode at a much greater depth, yet I cannot agree with your correspondent, in manifesting such bitter feelings against them, for having proved the mines as deep as the inadequate machinery would allow them to go, especially as more than one celebrated mining captain, who have visited the mines, distinctly stated, that they did not consider the lode had been sufficiently explored in those *worthless* levels, previously to the erection of the steam-engine, since which (not only *one or two*, but upwards of 12 months ago) the operations in them have been suspended. The new engine-shaft was sunk with every possible dispatch, and a cross-drift was made at the depth of 52 fms., being 30 fms. below where the lode had actually produced upwards of 10 tons of ore per fm.; and had the lode improved in the 40 (below the adit), as from the favourable appearances we were justified in anticipating, the results would have been different—*we* should have been fortunate *shareholders*, and the agents would have been celebrated *men*; but I, for one, am sorry that, although the lode at this point is strong and regular, yielding good stones of yellow copper ore, there is too great a sameness in its composition, structure, and general character, and hence the inspecting and operative agents could *but* come to this conclusion—viz.: that as the indications in the upper levels were good, the lode *large, regular*, and *productive*, a larger quantity of ore was to be found in it *somewhere*—it was not, however, to be seen in the 40, and there was no alternative, but to recommend seeking for it deeper. Your correspondent thinks, without assigning any reasons, that 30 fms. is the proper depth for one here—forgetting, perhaps, that the lode further west has already been intersected 90 fms. below the adit, being 40 fms. under the greatest deposit of ore ever discovered in this promising adventure, and 30 fms. of ground in which no intermediate level has been driven; the ground at this depth is conspicuously changed, as is the matrix of the lode; and, from the splendid stones of ore broken from this part, it has been a source of regret that the increase of water, immediately on the intersection of the lode, overpowered the machinery, and hence nothing further has been seen of it. The agents of the company, who have been entirely engaged in mining from infancy, have a good opinion of this part also; and they *alone* have given satisfactory reasons why ore has not been found in considerable abundance at that depth, where such riches have been discovered in the celebrated mine near us, and why we are likely to reach it at a greater depth; and, although they do not, I believe, pretend to see through the ground, the "Practical Agent" is really not able to give them the least information in any branch connected with mining; but, if he continues to feel so much sympathy for the unfortunate, let his advice be tendered in due time, and not after the results are obtained, when it is worse than useless. It is also absurd for a man to boast of the knowledge he has of the different mines and minerals in the "eastern district of Cornwall," and the "western district of Devon," as if the former had been as far apart from the western part of the county as Australia is from England. Does he know that the granite and slate formations of the neighbourhood of Carn Brea are similar to those in the Callington district?—but, if his knowledge is confined to the latter, and there is no lode yet discovered in it of a similar structure and composition as that of Wheal Martha, how, then, is he capable of giving an opinion on this mine? is the question of—GEOLOGICUS.

Oct. 20.

WHEAL CONCORD MINING COMPANY.

SIR,—Having received a circular from the secretary of this mine, conveying a resolution passed at a meeting, held on the 30th ult., which is in effect to ascertain whether the purser has received any calls which he has not accounted for, it would appear to me from the proceedings, noted in your Journal, that there is a sad misunderstanding existing somewhere, and, no matter who is in the wrong, we, as shareholders, are the sufferers. I recollect, Sir, being at a meeting, held at the offices in London, when two gentlemen, in whom I for one reposed every confidence, were appointed as auditors, who were required to report, at a subsequent meeting, the result of their examination of the accounts. Now, Sir, I believe that, up to the present time, no report has ever been made by them, and, if rumour be not false, the moneys charged in the monthly cost and remitted have not been fairly applied. This requires some explanation, and I trust that the shareholders will require from the auditors an account, and the explanation so essentially necessary. It is useless to name gentlemen to fulfil certain duties, of which they willingly promise the performance, if that, by negligence on their part, our interests are sacrificed. I repeat, certain rumours are afloat, which reflect neither credit on the lord, purser, secretary, or committee of management; while the auditors I consider equally censurable, for not having fulfilled the duties of their office, and reported the results to the shareholders.—A SHAREHOLDER: *Oct.* 19.

[We are aware that much dissatisfaction exists with the adventurers generally, and agree with our correspondent that, if auditors be appointed, a duty devolves upon them, either to examine and pass the accounts, or to convene a meeting of the shareholders, and make a report, giving their reasons for not fulfilling the duties imposed upon them. We believe a statement was made at one of the meetings, by one of the auditors, to the effect, that the vouchers were not forthcoming; but we are not aware that any further steps were taken in consequence.]

WHEAL CONCORD MINING COMPANY.

SIR,—Having received a copy of the resolutions entered into at a meeting of the adventurers in the Wheal Concord Mining Company, which meeting was purported to be called by the secretary, I am at a loss to imagine how any shareholder in this mine could recognise such a meeting. If the shareholders who attended the meetings held in April and May last will take the trouble to look back, and think on the proceedings and statements made on those occasions, they will remember that it was then decided, that no meeting of the body of shareholders could be held, unless the same was called by the purser: such, however, does not appear to have been observed on the late occasion—of this there cannot be a shadow of doubt; and, after such determination having been arrived at and acknowledged by the body of adventurers, it would be absurd to suppose that any meeting could be legal, or indeed recognised, without the same having been called at the instance of the purser. At a meeting, held in April last, auditors were appointed, for the purpose of auditing the accounts generally. I wish to ask those gentlemen, through the medium of your Journal, the reason why these accounts were not audited, and a meeting called for the production and passing of them. It will also be remembered, that the purser agreed to allow every access to his books, and to render every assistance; and a resolution was, moreover, passed, requiring the clerk on the mine, Mr. Thomas Weekes, to produce all the vouchers for moneys received by him from the committee. I would ask, have these vouchers been produced to the auditors or to the committee?—or have accounts, in any shape, been rendered of the moneys received by him, and their application? If this has not been done, in accordance with the directions of the shareholders, and if the accounts be not audited, I do think there is great blame to be attached to those gentlemen who undertook the responsibility of auditors, for having neglected the interests of the shareholders, and, in the absence of which, I think they are, at least, called upon to afford some explanation of that which appears to me neglect on their part. I, certainly, shall not take part, or hold myself in any way responsible for any acts by the secretary, or others, which may appear to me to be irregular, and inconsistent with the ordinary rules observed in working mines. I trust this letter will have the effect of exciting the attention of those interested.

London, Oct. 20. J. R. (an Original Shareholder.)

CONDURROW MINING COMPANY.

At a meeting of adventurers, held at the mine, on the 12th inst., the accounts were examined and passed, showing:—Balance due to purser end of July, 323*l.* 18s. 4d.; labour cost for August and September, 783*l.* 10s.; merchants' bills, 165*l.* 14s. 4d.; dues on copper and tin ores, 58*l.* 8s. 3d. = 1331*l.* 10s. 11d. —By amount of copper ore sold, 983*l.* 4d.; by tin ditto, 185*l.* 3s.: leaving balance due to purser, 163*l.* 3s. 11d.—The following report was read to the meeting:—"Since the last meeting on the 10th of August, the sump has been completed to the 60 fm. level; the last 3 fms. were very productive of tin, and the 60 fm. level driving east and west continues productive. The tutwork is increased, by sinking a shaft and driving two levels. The new shaft referred to is at the point of the western working of the old mine, and from it we expect to clear out the 10 fm. level in the old mine in the course of the next two months. The new levels are the 40 east on the old lode, and 50 west on a north lode. We have also more tributers at work, and can look forward to sample as much copper ores as heretofore, and an increased quantity of tin ore. The fall of the standard of copper made a difference of 160*l.* or 170*l.*, when compared to our previous sale of ores; we, however, believe we shall sustain no loss on the two months' workings, and the prospects of the mine, on the whole, were never better than the present."

EXMOOR WHEAL ELIZA MINING COMPANY.

A meeting of adventurers was held at the Queen's Head Inn, Tavistock, on Tuesday, the 12th inst.—JOHN LONG COLLEY, Esq., in the chair.—The accounts to the 30th Sept. were presented, examined, and passed, showing balance in favour of the company of 95*l.* 9s.—The following report from Captain J. Pryor was read:—"Since the last meeting in August, we have completed sinking the engine-shaft to the 12 fm. level, and have commenced driving the cross-cut south from the shaft towards the lode—at the present time we have driven about 5 ft. in the end; it will be remembered, that we had several small branches that crossed the shaft, in sinking leading from the north towards the south lode—one of which we have now in the present end, composed of copper ore, mundic, and white iron, with prian and quartz, of which I send you a few of the specimens from the same—the price given for driving the end, 6 ft. wide and 7 ft. high, at present is 10*l.* per fm. In the shoding at the surface we have extended the cutting about 60 fms. in length, but up to this time this ground is not made good; we had in places what is termed a *false shelf*, and we have alluvial earth at the present time about 29 ft. deep, in many places we have met with very strong gossan shode. I should recommend the shoding to be continued, and also to commence the driving a cross-cut, from the engine-shaft towards the north lode, immediately by four men, and to take two out from the south end to make each pare four men; we shall do more work in proportion to time, as we shall then have four men the full time, and no lost core by night." Capt. Pryor was instructed to put four men to drive north, and four men south, in the 12 fm. level. In a subsequent report, Capt. Pryor writes—"We have made further and other discoveries in driving the end; we cut another branch about 7 in. wide, and about 3 ft. apart from the former branch, which is far superior to the first branch—this is very encouraging. I send you by the bearer a few of the specimens from the present branch. I should further state, that the ground in the present end is more favourable, and of beautiful blue killas."

GREAT WHEAL MARTHA MINING COMPANY.

A special general meeting of adventurers was held at the offices, yesterday, the 22d inst.—J. BRIGHTMAN, Esq., in the chair.—Mr. COLE (the secretary) having read the notice convening the meeting, together with the minutes of the last meeting, the CHAIRMAN stated, that the object of the present meeting was to confirm the resolution for dissolving the company, passed at the last meeting, which he then read. Considerable discussion ensued, in which the several shareholders present took a part, from which it appeared that it had been found impracticable to fill up the list of shareholders for the proposed new company—their being only 1102 shares subscribed for; at the same time, one and all appeared to feel the necessity of doing something, to prevent the dreadful sacrifice of their property, by proceeding to an immediate dissolution of the company, and sale of materials, at the present depressed times. After a lengthy conversation, by which it appeared that the opinion was still entertained by the adventurers of the mine proving productive at a greater depth, and that the wisest course to pursue would be, to suspend the workings for the present, and to raise a sufficient fund to satisfy the claims on the mine, it was proposed, as an amendment to the resolution for dissolving the company, that the payment of the calls in arrear should be enforced, and the 106 preferential shares that had not been allotted, be disposed of, which would put them in funds for that purpose—which, appearing to meet the general concurrence of the shareholders present, the whole of the 106 shares were subscribed for in the room, Mr. P. N. Johnson taking for himself and a friend 50 of them; when he (Mr. P. N. Johnson) proposed, and Mr. Hollingsworth seconded, a resolution to the above effect, which was carried unanimously. After the usual compliment to the chairman, the meeting separated.

KILBRICKEN SILVER-LEAD MINING COMPANY.

The quarterly meeting of adventurers was held at the Grand Hotel, Coventgarden, on Thursday, the 7th inst.—HENRY CROCKFORD, Esq., in the chair.—After the usual preliminary proceedings, reports were read from Capt. John Williams, of the Godolphin Mines; and from Capt. S. Williams, of the Kilbricken Mines. The following is dated Ludgvan, Oct. 2, and is of the most interest, being a report on the works, and prospects of the property:—"The 20 fm. level end has been extended north-east 10 fms. this summer, through kindly ground, but has produced nothing worth notice; it still contains spots of ore, but is of no value. We have holed Wyld's engine-shaft with a borer, and have a little more than 1 fm. to sink it through, which will be done in a fortnight. The 10 fm. level, at Evan's shaft, has been extended 6½ fms. through poor ground, and is now suspended. We have extended the 10 fm. level, at the Bog shaft, 5 fms., in which we have raised about 2 tons of ore; there is a very kindly lode here—but, as it is dipping fast below the level, leaving nothing but limestone in the backs, it cannot be profitably worked at that level, and is, therefore, suspended. The pitches in the back of the 20 fm. level have entirely failed, and the ore in the bottom of the 20 fm. level is all cut away to the level of the water; the ores raised from the declining bunches in the backs have yielded less in washing, and been inferior in quality, to those raised in the bottoms formerly, so that we have no more than 6 or 7 tons of ore now raised. The new engine is in a very forward state, and the boiler being put together. We shall have built the stack and boiler-house, which are now in progress against the boiler is ready and the shaft through. It will be seen that, in consequence of our being unable to sink after the ore in the old shaft (called the new engine-shaft), that we have to lay open the mine in the 33 fm. level before any profitable results can be expected. To do this, I consider it will take 12 *working* months, at an expense of 220*l.* per month, by confining ourselves to the sinking of Wyld's engine-shaft, and driving the 20 fm. level. To sink Crockford's shaft (which should be done), it will cost 40*l.* per month more for the same period. I have sent you sections of the workings, and the new work required to be done is shown by the dotted lines at Wyld's engine-shaft, in section 3; and this section, with No. 2, which will fall together in depth, will also show you the extent of ore ground that may be expected at the next level. I now refer you to mine to Mr. Brand, of the 30th ult., explaining the sections, from which you will see that the prospects of your ultimate success are still good, although a much greater expenditure is required to accomplish our object than was at first expected." A statement of the liabilities was then read, and the secretary was instructed to call a special general meeting, to decide upon the necessity of making a call.

NORTH WHEAL ROBERT MINING COMPANY.

At a general meeting of adventurers, held at the Guildhall, Tavistock, on the 12th inst.,—JOHN PHILLIPS, Esq., in the chair,—the accounts having been examined and passed, the captain's report was read, and, in order to carry out the plan proposed therein, a call of 5*s.* per share was made. Some relinquished shares were accepted by the company, provided all the calls and arrears be paid; and the following shareholders were appointed a committee:—J. Seccombe, F. Wilkes, G. Paige, Capt. Carpenter, and J. H. Snell.—The following is the report presented to the meeting:—"I expected to have made the communication to the winze against this meeting, and used every exertion to do so, but the air was not sufficient for the men to work their whole time, which caused the delay. There is now 10 ft. to hole, which will be completed some part of next week—without an accident. In my report of September, 1846, from the improvement in the lode, at the depth we sunk, the mine ought to pay cost in the 10 fm. level when the ground was opened. In reference to that statement, I am sorry to say I am disappointed in my expectation. I then supposed the dip of that bunch of ores would be east from the cleavage of the lode dipping east, and from the whole of the bunch above being in the winze, and west from it. From the appearance of the rise at this time, I believe if any part of that bunch went east it was a very small part. We have risen 5 fms. 5 ft. in the back of the 15 fm. level, with very little ores; the lode has a very different appearance all the way in rising; in the western end the lode is 20 in. wide, while in the eastern end it is scarcely 1 ft. in any place; I am inclined to think, if the rise was a little further west, we should have had more ores. The lode in the 15 fm. level is 20 in. wide, very strong, and looking better than I have seen it all the way in driving; when the winze is holed we shall have a mine 44 fms deep, with a promising breast of ground 15 fms. high, and getting up to the back of the wood, where we may expect more ores. There is a caunter lode further south that will intersect this one about 30 fms. further west, which is also favourable. I expected to have let down the water from the top of the hill before this time, as we did from the winze. I am inclined to think there is a cross-course between, which kept the water up; it would be very important, inasmuch as we should be able to work the north lode, where there is such fine gossan on its back. For our future operations, after the winze is holed, I propose putting six men to drive the 15 fm. level west, and two men to stope on the ore ground west of the winze. I expect the whole of the men will be breaking ores, from the present appearance, and I propose dressing it up."

TAMAR SILVER-LEAD MINING COMPANY.

The annual general meeting of shareholders in this company was held at the offices, Finsbury-square, on Thursday last, the 21st inst.

P. N. JOHNSON, Esq., F.R.S., in the chair.

The CLERK having read the notice convening the meeting, the following directors' report, as also those from Captain Sprague, and P. N. Johnson, Esq., were read:—

DIRECTORS' REPORT.

The statement of accounts, which, together with the agents' report, we now have the pleasure of submitting to you, will afford substantial and convincing proofs of the propitious condition of these mines. Capt. Sprague's report will furnish a particular account of the several operations, and their results, since the last general meeting; and your directors will, therefore, briefly direct your attention to the financial statement of the company, which, when considered in connection with the present improved state of the mine, and pecuniary position, last year, shows a result certainly satisfactory. The accounts passed at the last general meeting, presented a balance against the mines of 872*l.* 18s. 4d. The accounts now to be submitted, show a balance in favour of the company of 896*l.* 4s. 2d. —thus proving that the mine has made, during the last 12 months, a clear profit of 1770*l.* This fact must not be considered abstractedly, but in connection with the circumstance of a large expenditure of profits having been made, for the purpose of rendering this property more productive, and to perpetuate regular and profitable returns to the proprietors. It will not, therefore, be superfluous to mention that dividends might have been declared, had only the temporary benefit of the shareholders been considered; but your directors, feeling confident that such an immediate advantage would entail future loss, and frustrate the object of prosecuting legitimately the mine, and making those discoveries which now give promise of rich production, preferred for the present suspending dividends to sacrificing the real interests of the shareholders; simply, therefore, your directors have acted upon the principle of preferring future, but certain, profits, to the immediate declaration of a dividend, and ultimate loss. At the south mine, very extensive operations have been carried on, and much valuable ore ground laid open; but the most encouraging circumstance to which your attention should be directed, is the north mine—here it was stated, at the last general meeting, that disappointment had been experienced; it will, therefore, be gratifying to hear that operations having been extended on the lode, in the 60 fm. level—it is found to be of a very promising character, and gives indications of becoming a very lucrative part of the sett. As the several operations, indications, and prospects are fully described and expressed in the agents' report, it would be superfluous to reiterate them; it remains, therefore, for your directors, only to notice that the smelting department continues to progress in the most satisfactory and profitable manner. That the statement of accounts is such as to justify the anticipation of a very early reversion of that department, with all its concomitant advantages and profits to these mines. This adventure, therefore, whether considered in its present condition, or future prospects, or in connection with, and relative to the Tamar smelting department, may, with confidence, be said to present a result most satisfactory and propitious.

MR. JOHNSON'S REPORT.

Tamar Silver-Lead Mines.—Although our mines have been for the past year not sufficiently productive to enable the directors to pay a dividend, you will see, by the accounts submitted, that they have been working to a profit, which will, I trust, soon be sufficient to return interest for the capital invested. It has been my earnest endeavour, in conjunction with our agent (Capt. Sprague), to conduct the operations with every due regard to economy, consistent with the full development of the mine, and to confine the operations to such points as are most likely to lead to increased returns in depth; and I am happy to say, that such prospects are seen, and being realised, both at the north and south mine. At the south mine, our returns have not been so great as they were years back; but our cost has been limited in proportion. The productive ground, in the upper levels, has been mostly worked away; but some is yet being broken by tributers to advantage. Our present ore ground is in depth at, and under, the 115 fm. level, and as the ore increases in depth, it appears to widen in extent, as well as being of a more productive nature; and now that the inclined shaft has reached some of these lower levels, we shall be able to work with greater economy, both from facility of raising the ore, and proper ventilation. At the north mine, the returns are about meeting the cost of working; but, as we shall soon be in a more efficient state of working, by the erection of a steam-whim, which is now in a state of forwardness, I trust the time is not far distant when we shall be making profits. The lode, both in the 60 and 70 fm. levels, is very promising and productive, and would fully justify our sinking the shaft to deeper levels, and which would, I have no doubt, enable us to see the lode in more congenial ground. It has been my earnest endeavour to make such arrangements for dressing the ores as the peculiar character of the mineral requires; and which, while it prevents loss, enables us to return them much more economically. The machinery is in good order; and the unremitting attention of the agents, and general good conduct and labour of the men, deserve my special notice.

Smelting Department.—I am happy to say, that the plan proposed, in the introduction of smelting, has been of the greatest benefit, as at least 20*s.* per ton more is obtained for the ores of the Tamar Mines than the average price obtained for the ore sold in the year previous to commencing these operations, which, from our average return, will show a profit to the mine of about 1000*l.* a year. As there is yet a profit in the price agreed to be given, this profit will also be added to the advantages, when the capital is all paid off, which was raised in order to commence smelting. You are aware, one-half the subscribed capital has been returned with 50 per cent. bonus, amounting to three-fourths of the first subscribed capital; and I consider that there is now sufficient accumulated profit to pay off another 25 per cent., with the bonus; but should recommend such division not being made until the directors have this amount in money at their immediate command. The operations are continuing with caution and success; and I look forward to no distant period when these works by merging, as they will, into, and becoming the property of, the Tamar Mines (independently of any profits arising out of the operations of the mine), will be productive of a large interest to the holders of shares. We have now in operation seven calcining, three flowing, three blast, four refining, and one roviving, furnaces, and are building two more calciners and one flowing furnace, which I calculate are sufficient to smelt about 300 to 320 tons of ore per month, employing from 80 to 90 men. The premises have not only been thoroughly repaired, but additions made, to nearly

double the extent they were when first taken by the company, as well as taking advantage of the rising ground, peculiar to the locality, for forming deposit chambers for the lead ashes, which, in other establishments, is lost for want of those local advantages. A system of books and operations is adopted, so that there is a check upon the workmen in every department, from the quantity of ore coming on the premises, until it leaves as lead silver—the results of which are most highly satisfactory. In conclusion, I beg to say, that the smelting department is conducted with system and order, and very advantageous and profitable results.

MINE CAPTAIN'S REPORT.

In giving you the annual report of these mines, I beg to observe that, in my last year's report, I gave you to understand that we had about 40 fms. to drive in the 145 fm. level, to get under the regular ore ground; but it has been carried south further than we expected, by the floor of ground dipping further south than usual; and I am happy to inform you that this end, at present, is looking well, and producing good work: so that we may say we have out our regular shoot of ore. We have driven our levels north and south about 370 fms. The 135 and 125 fm. levels have been the most productive; and in the 60 fm. level south we have two pitches working, at 13s. and 14s. in the 1l.—at which prices the men are getting wages. The engine-shaft is now about 4 fms. under the 160 fm. level; the lode in the shaft is 2 ft. wide, producing some good work: so that we may say the mine is improving in depth. The incline shaft has been sunk about 17 fms. in the last year, and is now in the 125 fm. level. At Hole's Hole we have sunk a shaft 30 fms., and driven a cross cut about 13 fms. west; and cut the lode, but found it to be poor. At Wheal Hancock, in the 27 fm. level, we have cross-cut about 25 fms. east; and have not made any discovery. At the north mine, the engine-shaft is now to the 70 fm. level, and this level is extended north about 37 fms.; the greater part has been poor, but the last 9 or 10 fms. has been productive, and ground that will set on tribute. In the 60 fm. level, we have extended on the course of the lode about 60 fms., and found it to be about 3 ft. wide, composed of can, capel, and peach, with branches of silver-lead ores, and which is working at a high tribute. We have now 12 pitches working at the mine.—JAMES SPRAGUE.

From the statement of accounts it appeared, that the balance from last account was 872*l.* 18s. 4d.; cost for the 12 months, to August, 18,705*l.* 15s. 10d.; discounts, 176*l.* 2s. 3d.; directors, management, stationery, &c., 499*l.* 17s. 1d.—together, 20,254*l.* 13s. 7d.—Ores sold, 21,150*l.* 17s. 8d.: leaving balance in favour of the company of 896*l.* 4s. 2d.

The CHAIRMAN said, he was glad that he was present, to answer any questions which might arise in the absence of Captain Sprague, who would have attended the meeting, according to the wishes of the proprietors, expressed at the last meeting, had he not been prevented by illness, entirely brought on by over exertion in the business of the mine. He, however (the chairman), had been for the last three weeks on the property, and should be happy to give any information required.

Mr. WINSTANLEY having made some inquiries as to the original prospects for working the north mine, and also Wheal Hancock, which adjoined that mine still further northward, the CHAIRMAN explained, that it was not done without the consent of the shareholders; and although, after expending the 10,000*l.*, it appeared an unfortunate speculation, they had persevered; and, after laying out about 2000*l.* more, they had brought it, some time since, to pay its way, and he felt confident it would turn out a good concern. At Wheal Hancock, however, at present they were not so fortunate, and the working was for the present suspended, until they could see their way clearly. The leases, machinery, &c., were all paid for; and it would, most likely, at a future time be advisable to prosecute the search for the lode, which had not yet been cut, but could be seen at surface.

Mr. BARCLAY inquired, how soon the remaining 25 per cent. of the amount advanced for carrying out the smelting company might be expected to be returned to the shareholders; when,

Mr. STAINSBY explained, that they had already the means by them to return it; but a great portion was in bills, not in maturity until January; and it would not be wise to attempt to discount them, at the present enormous rates. Sales, however, might be made for cash, which would, of course, assist them; but, at all events, he had no doubt, they should be able to pay all off considerably before Midsummer next.

Some conversation then ensued, from which it appeared that the company had smelted 869½ tons of lead, which produced 61,447 ozs. of silver, and, the loss having been but 1½ per cent., they had cleared 8¾ per cent. more silver than they paid for. It also appeared, that there were now lying at Messrs. Bult and Co.'s 9700 ozs. of silver, expected to realise 5s. 4½d. per oz., and about 5000 ozs. more were expected next Tuesday. A resolution was then passed (for which see our advertising columns), adopting the report, and also the following:—"That the thanks of this meeting are due to Mr. Johnson, for bringing the mine and smelting works to their present state, and his conduct in the chair on the present occasion; as well as to the directors, for their attention to the affairs of the company." The meeting then separated.

TREWOLLACK MINING COMPANY.

At a meeting of adventurers, held at Pearce's Hotel, Truro, on Monday, the 14th inst., the accounts were examined and passed, from which it appeared that the costs and merchants' bills for four months, ended Aug. last, amounted to 743*l.* 15s. 11d.; balance of loss to end of April, 246*l.* 19s.—990*l.* 14s. 11d.—By calls, 609*l.* 9s. 6d.: showing balance against the adventurers of 381*l.* 5s. 5d.—Capt. Lean having reported that he considered the prospects of the mine very discouraging, and that the present engine was unable to keep the water, it was resolved, that the operations of the mine be forthwith stopped, and the underground machinery and materials be brought to grass, and that the engine and all machinery and materials be advertised and sold as speedily as practicable; that the purser be directed to require payment of all arrears of calls, and that in default of payment he be authorised to take such legal proceedings as he may find necessary; that a call of 1*l.* per 256th share be made on account of the costs, and forthwith collected.—The following report from Captain Lean was read to the meeing:—"In reporting on this mine I beg to state, that our 30 fm. level has been extended for a great distance; and although the lode at times presented flattering prospects, with good specimens of lead, yet, at the present time, it is worthless, hard, and split in branches. Our 20 fm. level is extended 30 fms. south of the point where the promising lode came in at the adit level, and a winze has been sunk from the adit to the 20 fm. level; and I am sorry to say, the fine promising lode did not hold down but a short distance under the said adit, where the lode became hard, worthless, and also split in branches; under those circumstances, looking at the present state of the mine, with the insufficiency of our engine to allow us to sink any deeper, or even to keep the water in the winter season at the 30 fm. level, I cannot recommend you to go on any further."

WHEAL SETON MINING COMPANY.

The two-monthly meeting of adventurers was held at the account-house, on Tuesday, the 12th inst.—The accounts, having been examined, were allowed, and a dividend of 20*l.* per share declared. The accounts showed:—Amount of July cost, 1273*l.* 4s.; August, 1075*l.* 9s. 4d.; merchants' bills, 881*l.* 8s. 3d. = 3230*l.* 1s. 7d.—By sale of copper ores, July 1, 1489*l.* 11s.; ditto August 5, 4025*l.* 17s. 7d. (less lords' dues, 367*l.* 13s. 10d.) = 5147*l.* 14s. 9d.: leaving profit of 1917*l.* 13s. 2d.; add balance due from purser to end of June, 1977*l.* 1s. 7d. = 3894*l.* 14s. 9d.—By dividend of 20*l.* per share now declared, 1980*l.*: leaves balance in hand, 1914*l.* 14s. 9d.—The following report from the mine agent was read to the meeting:—"Since our last report, we have commenced a cross-cut north from Bull's lode, on the cross-course in the 90 fm. level, and have driven 2 fathoms on it; we have about 6 fms. further to drive to intersect the south caunter, which will take about three months to do, should the ground continue as at present. The sumpmen are now employed in cutting down the north part of Bull's shaft in the 90, preparatory to sinking below that level; this will be completed by the end of the present month. In the 80 fm. level west, on the south caunter, the lode is 10 ft. wide, no south wall, worth 60*l.* per fm. In the 70 fm. level west, on ditto, the lode is 5 ft. wide, composed of spar, mundic, and stones of ore. The stopes in the back of the 60 fm. level west, on ditto, are worth 25*l.* per fm. The cross-cut in the 50, towards Tilly's shaft, has been driven 8 fms. In the 80 fm. level west, on the north caunter, the lode is 12 ft. wide, worth 180*l.* per fm.; the stopes in the back of this level are worth 150*l.* per fm. In the 70 fm. level west, on ditto, the lode is worth 40*l.* per fm.; the stopes in the back of this level are worth 150*l.* per fm. In the 60 fm. level, on ditto, the lode is worth 80*l.* per fm.; the stopes in the back of this level are worth 150*l.* per fm. In the 50 fm. level west, on ditto, the lode is 5 ft. wide, composed of jack, mundic, spar, and stones of ore; we have commenced the rise in back of this level to the 40 last week In the 40 fm. level west, on ditto, the lode is 4 ft. wide, containing good stones of ore, presenting a more promising appearance than for the last 15 fms. driving. In the 70 fm. level west, on Kneebone's branch, the lode is 3 ft. wide, worth 12*l.* per fm. The 60 cross-cut has been driven north of the north caunter about 33 fms. Tilly's shaft would have been completed to the 50 fm. level at the time specified in our last report, but for a breakage, which created a delay of at least a fortnight. Cock's engine-shaft is completed to the 34 fm. level; we are preparing to drop the lift below that level, we expect to complete it to the 44 fm. level (which is the bottom of the shaft) by the end of November. In conclusion, we beg to state, that the ore money to be credited at the next account will exceed that of the present two months by about 600*l.*"

WHEAL TREHANE MINING COMPANY.

At a two-monthly meeting of adventurers, held at Liskeard, on Wednesday, the 12th inst., the accounts were presented showing—Balance, August 27, of 715*l.* 2s. 10d.; by sale of ores, 752*l.* 9s. 4d.=1467*l.* 12s. 2d.—Labour cost and materials for June, 262*l.* 19s. 2d.; ditto July, 229*l.* 3s. 0d.; lords' dues, 48*l.* 16s. 3d.; dividend declared, Aug. 17, 256*l.*: leaving balance in hand of 670*l.* 13s. 9d.—The accounts were examined and passed, and a dividend of 1*l.* per share declared.—The following report was presented:—"Kelley's shaft is sunk 1 fm. 3 ft. below the 35 fm. level; our progress in sinking this shaft has been slow, having met with hard elvan; we have passed through this rock into killas, and the ground is now favourable; a cross-cut is driven from the 35 fm. level to this shaft, and the plat made; the lode, in this level, north of the cross-cut, at Kelley's shaft, is 20 in. wide, abounding with fluor-spar, interspersed with lead ore—a fine-looking lode, but not at present rich; the end, however, is much improved, giving hope of increased produce; the stopes, in the back of this level south, between Kelley's and Philip's shafts, are turning out good work, and the ground is easy to break. The 30 fm. level north, in the school ground, has not been so productive as was anticipated; it has, however, lately improved, and the last 8 fms. driven has turned out an average proportion of lead ore; the lode through this ground has a promising appearance, with a fair prospect of yielding good returns, and which we are warranted in expecting from the Trelawney ground, on the north of us, proving rich, and towards which we are driving with all expedition; the south stopes, in the back of this level, in Kelley's right, are looking well, the ground fair, and turning out some rich work, set at 9s. per fm. We expect, should the weather be favourable, to connect the pump-work in Kelley's shaft, by means of flat-rods, bobs, &c., with Trelawney engine, by Saturday week; in the meantime, we can continue to sink the shaft, should there be no more water than at present. On Kelley's shaft being sunk to another level, we can open new ground, when increased returns are likely to be made, which will enable us to declare a larger dividend. The parcel of ore now ready for sale is about 56 tons—samples of which will be sent to the smelters for their offers, immediately after the same is carried to the water-side."

ALTEN MINING ASSOCIATION.

The annual general meeting of shareholders in this association was held yesterday, at the offices, Winchester-house, Old Broad-street.

J. LABOUCHERE, Esq., in the chair.

The SECRETARY having read the notice from the *London Gazette* convening the meeting, and the minutes of the previous meeting, which were confirmed, Mr. WOODFALL (a director) read the following—

DIRECTORS' REPORT.

The directors have, at this annual meeting to submit accounts for a period of 12 months, to make a few observations on the proceedings of the past year, ending 31st March last, on those of the first five months of the present, and on the future prospects. The last year did not pass without our experiencing some of those fluctuations characteristic of the pursuit in which we are engaged. An inundation at Raipas, which caused the supports of the mine to give way, excluded us for many months from access to our best courses of ore; this accident, although vexatious, will not be attended with any eventual loss, and means have been taken to guard for the future against similar mishaps. The produce of the first six months of last year was considered highly satisfactory, being 1100 tons of ore, producing 65 tons of copper, as returned to the smelting-house, and the directors did not, therefore, hesitate to declare a dividend of 5s. per share in October; but, in consequence of the accident just alluded to, the returns for the last six months fell considerably short—hence the profit on the year's workings is not equal to our expectations, though, for reasons hereafter explained, the directors feel satisfied with the results. In comparing the produce of the first five months of the past, with the corresponding period of the present year, the directors find, in 1846, 737 tons ore were returned to the smelting-house, producing 45 tons copper; this year, 831 tons ore, producing 50 tons of copper. The returns have exceeded the estimates, a proof of the care taken by the manager to avoid the possibility of leading us into error, by over-estimating the produce. The advices, lately received, lead the directors confidently to expect an increased production at the Raipas Mine; the unproductive labour that was commenced, as a matter of necessity, after the inundation last autumn, now completed, will be of great benefit in the future operations here. Those shareholders who may have read the reports from the manager during the last few months, will have observed, that not only has the quality of the ore from all the mines improved, as well as the quantity increased (during the last three months more especially), but that fresh discoveries of promising character have been made, which may be found hereafter of considerable importance to the association, and the directors have much pleasure in reading the following postscript from Mr. Thomas's last report:—"The enclosed note from Capt. Monk was received after this report was written. The stone of ore alluded to is very rich, and appears to be a transition from gossan to purple ore. I shall visit Raipas in a few days, and hope to be able to report favourably of this improvement with next post."

"*Raipas, Sept.* 13.—It is with pleasure I have to announce to you, that the lode in the level, in Labouchere's, has greatly improved within the last two or three days, and is at present wearing a most brilliant aspect—a specimen of which you will receive by the bearer. In the other parts of the mine there is nothing new, except in the roof stope, above Labouchere's, which has again become more settled, and is at present producing some rich ores.—SAMUEL MONK."

The next advices on this point will be interesting. Under all the circumstances, although the profits of the past year did not reach the point which the directors had a right to anticipate, amounting only to 1006*l.* 17s. 9d., yet the directors feel fully justified, under the improved state of the affairs, in recommending a dividend being made of 5s. per share, payable as soon as the copper on hand, and on the way, is sold. In the last year's report, the directors pointed out how desirable it would be to take advantage of any opportunity that might offer of increasing our capital; the grounds for this are not at present less cogent, and the directors still trust that favourable circumstances may arise, to enable them to strengthen their position; the hope, too, that some part of the surplus profit may come in aid of this object is by no means extinct. Another plan has been suggested, by which the object may also be attained. It is known, perhaps, to most of the shareholders, that a party of Norwegians have been working some mines at a place called Quoenangen, about 20 to 30 miles from Kaafiord, and that finding the ores of such a quality, as very advantageously mixed with the Alten ores, the directors have been in the habit of smelting for them at a small profit. The usual consequences of commencing with insufficient means have been experienced by them—their capital has been laid out in roads and buildings, and opening ground, and they are now ready to resign their mines for less than they have cost them. Should a small company be formed for working these mines, the shareholders would, probably, comprise most of those who are adventurers in the Alten; and should the progress of the mine be successful, it might be a matter mutually advantageous hereafter, to amalgamate the two concerns. The general charges on both establishments would thereby be greatly diminished. The directors have to call your attention to one new feature, introduced into the working of the establishment—the adoption of the system of tribute, to which is in part attributable the increased per centages of the ores—one, with its decided advantages, the directors had heretofore despaired of successfully introducing, from the circumstance of the men having no opportunity, as in Cornwall, of checking the assays of the manager; and the implicit confidence that is placed by the workpeople in his assays is a point, with many others, to which Mr. Thomas may refer with honest pride. The following is an extract from his report on this subject:—

"It may, perhaps, be necessary to allude to the tribute system of working the mines, recently introduced, which in principle resembles that employed in most of the mining districts of Cornwall; and when the workmen have gained sufficient experience, and an insight into its various bearings, it will undoubtedly be attended with a permanent advantage to the concern. A spirit of competition has already arisen among our miners, who are eager for the return of summer, when they will resume many of the old workings, as well in the mines as at the surface; and we may thereby expect increased returns of ore, with comparatively trifling cost to the association. The wages of the miner will hereafter, in most instances, be regulated by the value of the produce, according to a scale of prices, dependent on the facilities offered him for obtaining and returning the produce in a fit state to undergo the smelting operations. Some months must still elapse before this system can be fully matured; but from the spirited manner in which it has already commenced, and the great desire shown by the people to enter into this, to them, new speculation, I feel convinced that it will lead to important discoveries, tending to the permanent welfare of your establishment, as well as proving highly beneficial to the mining population of this, your remote colony."

The directors would also refer you for more detailed information to Mr. Thomas's reports generally, and to the admirable digest of his smelting report in particular, which contains a mass of minute information as to the cost of the operations in their different stages. In conclusion, the directors believe that the general prospects of the association have improved since the meeting of shareholders held last year; and, entertaining the fullest confidence in the management of the affairs at Alten, by Mr. S. H. Thomas, the directors have only further to assure the meeting, that the concern shall continue to receive their best attention.

From the statement of accounts, it appeared, that the disbursements at Alten, and in London, amounted to 8773*l.* 12s. 4d.; dividend, Oct. 26th, 1846, 1250*l.*—together, 10,928*l.* 12s. 4d.—By balance last account, 1350*l.* 10s. 1d.; copper produce of the year, 9680*l.*=11,030*l.* 10s. 1d.: showing balance in favour of the adventurers of 1006*l.* 17s. 9d.

The CHAIRMAN then put the usual question, that the report and accounts be received and adopted, which was seconded, and carried unanimously.

Some conversation ensued on the suggestion in the report, as to the Quoenangen Mines, when Mr. WOODFALL observed that the most feasible plan which suggested itself was, to form a small separate company, with a capital of (say) 20,000*l.* To call up only half at first, which would purchase the mines, and give them a fair trial; and, if an amalgamation should afterwards be resolved upon, there would be some capital to fall back upon. He read the following letter from Mr. Thomas, the agent at Alten, dated 26th May, 1843, showing his opinion of the prospects of the mines:—

In reply to your last favour, of the 14th ult., I can merely state, that my unbiassed opinion is in favour of the proposed junction with Quoenangen, and for the following reasons:

1. The distance from Kaafiord to Quoenangen, across the mountains, is only 25 English miles, and direct land communication can be carried on both winter and summer.

2. From the number of copper lodes already discovered there, considerable returns of ore may be ultimately expected, which will enable us to carry on the smelting operations at this place with greater regularity, for a longer time annually, and, consequently, more advantageously.

3. The mines are about seven English miles from the Quoenangen Fjord; the transport of the ore is neither difficult nor expensive; and the freight from the place of shipment to our smelting-works would not exceed 8l or 8½ per ton.

4. No extra outlay of capital, in the formation of a new colony, will be required, as houses are already built, and a fast population, in some measure, established.

5. The management of the two concerns would devolve into one; and an able miner, of integrity and ability, to reside on the spot, would be the only extra person necessary.

6. The general charges and incidental expenses attending the united establishments, would exceed those on one of them, when separately worked, in a comparatively trifling degree; and the money generally absorbed by these items, would be more advantageously employed in prosecuting the mining operations.

If the proposed investigations and explorations prove fortunate, the works may be carried on advantageously at an expense of a comparatively small portion of the proposed capital—leaving the balance to fall back on in case of need. In this manner the returns, although always subject to fluctuations, would, undoubtedly, ultimately be permanent and profitable.

The quality of the ore is not much better than our own—8 per cent. may, however, be considered a fair average, and large returns of this quality are generally found a source of more permanent profit than the rich and irregular deposits of more fluctuating lodes. At Quoenangen, there is one lode in particular (E), which I consider would fully justify an outlay of 4000*l.* or 5000*l.* in exploring. It possesses unusually favourable prospects, combined with great regularity, and its produce has been exceedingly uniform to the depth of 25 fms. from the surface, the greatest as yet attained. In my opinion, the indifferent success that has hitherto attended the Quoenangen Mines, may be attributed to a want of system in conducting the operations, a disunion amongst the shareholders, and too limited capital for exploring so many lodes, together with a mistaken notion of economy in the mining departments in confining the excavations to certain limits, and thereby considerably augmenting the cost of producing a ton of ore.

A vote of thanks was then passed to the chairman and directors, and the meeting separated.

QUEBEC AND LAKE SUPERIOR MINING ASSOCIATION.

The first general meeting of shareholders was held at the offices, St. Peter's-street, Quebec, on the 27th September; the directors' report presented thereat showed that, notwithstanding the whole previous winter's work having been a total failure, in consequence of an inefficient superintendent being employed, still there was every prospect of most beneficial results. Capt. O. H. Mathews a miner of considerable experience, who has had the superintendence of mines in Cornwall; the Cobre Mines, in Cuba; the Bolivar, in Venezuela; and the Asturian, in Spain; had been engaged as superintendent, and had examined the whole of the company's possessions—these consist of 14 locations, of 10 square miles each, containing together 89,600 English acres—four between the harbour of Mamainse and Pointe aux Mines, seven on the Island of Michipicoten, one on the Island of St. Ignace, and two at Pigeon River, near the American boundary line at the head of the lake. It may be supposed that the minute exploration of this large tract of country cannot be accomplished in a short time. Capt. Mathews has, however, visited every location, on all of which favourable indications of copper have been discovered, particularly on the Isle St. Ignace. A vein of grey sulphuret having been there shown to him, of such magnitude and richness, that he did not hesitate in at once declaring it to be of very great importance, and admirably situated for mining purposes. On the location adjoining this (belonging to another company) considerable quantities of native copper have been found; and, from the veins running across both these locations, there can be no doubt that what has been discovered in one, will be found in the other. The Island of Michipicoten presents equally favourable indications, as well as the two locations near Pigeon River, situate within two miles of the celebrated silver location of Col. Prince, and consisting of precisely the same formation. Capt. Mathews assures the directors, that whatever success attends the works on the Prince location, will be met with on those belonging to this company, whenever mining operations are commenced there. But the interior of all the locations belonging to the company is as yet almost totally unknown. With one or two exceptions, the veins already discovered are on the lake shore, many of them, indeed, within a few yards of the water, beyond which is an unexplored wilderness. In only one spot between Mamainse and Pointe aux Mines have persons in the service of this company penetrated into the interior about two miles, where veins were discovered still richer in appearance than those on the coast, and where, to use the expression of one of the parties, "the surface of the ground presented the appearance of a network of small veins." It is not, therefore, improbable, that favourable as are the indications on the coast, richer discoveries will be made in the interior; but that years must elapse before the hidden riches of this immense region can be made available. The specimens laid on the table contained between 30 and 50 per cent. of copper, and it was the intention not to send ores to England of less than 30 to 35 per cent., and all below that produce would be calcined and concentrated to about from 50 to 60 per cent. In the introduction to the report, the directors notice the minute of Council of 7th Oct., 1846, in which the Government fixed the price of mineral land at 4s. per acre, and they observe, with much truth:—"The directors, however, fear that the liberal intentions of the Government on this point will, in a great measure, be neutralised by the high price of 4s. per acre for land, which is totally unfit for cultivation, whilst good farming land can be obtained at that price in various parts of the province. If the field for agriculture were curtailed by a monopoly of cultivable districts for mining operations, it might be equitable to throw that consideration into the scale when adjusting the price per acre for a track of country assigned to mining companies; but when the land, as in this case, is wholly unfit for agricultural pursuits, as far as it has yet been explored, the high price for it is a direct tax upon mining enterprise, without corresponding or counterbalancing advantages. To carry out fully and consistently the disposition evinced by the Government, mineral land should be sold at a merely nominal rate. The object of the Government should be, not to raise a revenue, but to stimulate and encourage persons willing to risk their private capital in developing the hitherto hidden riches of the province. Indeed, if no more than the mere deposit money were demanded for mining locations, 'the sacrifice' (to use the words of the Canada Committee of 1828, on grants of wild land) would be trifling, and would bear no proportion to the benefit that would result to the colony from such a concession.'"

QUEBEC MINING COMPANY.—The schooner, *Chippewa*, Capt. Angus, came down from Point aux Mines and Mica Bay of the north shore, on Friday last, with Mr. Wilson (Government officer), and C. W. Ross, Esq. (clerk of the Quebec Company). From the latter gentleman, and Capt. O. H. Mathews (the resident superintendent of the Quebec Works, we learn that everything connected with their enterprise is progressing most satisfactorily. We have been shown some specimens of rich bi-sulphuret of copper discovered in veins that may be characterised as feeders to the great vein of grey sulphuret which the company are now engaged in developing. An additional force of some 20 or 25 men for these works came up on the last trip of the *Detroit*, and will be immediately set to work. Indeed, under the energetic and experienced superintendence of our excellent friend, Capt. Mathews, the Quebec Mining Company, with present prospects before them, cannot fail of receiving ample reward for their enterprise.—*Lake Superior News*, Aug. 28.

THE PITMEN AND THEIR EMPLOYERS—SEGHILL COLLIERY.—The complainants in the case, Carr and others *v.* Gawin Redhead, which was heard at the North Shields Police Court on Monday, are the owners of Seghill Colliery; and the defendant was a coal-hewer there. Mr. George Archer Smith, of Newcastle (who appeared for the defendant), on the information being produced, stated that he should take several objections to it; but the bench declined hearing them until the case had been gone into. Mr. Wheldon (who appeared for the complainants), then called Thomas Patrick, the underviewer, who stated that, when the defendant was first employed, he informed him that it would be upon the same terms, and subject to the same rules, as the men then engaged upon the colliery; and that one of these rules required a man, before leaving, to give a month's notice. The rules were printed and hung up in the office where the men were paid, and were also read once a quarter. The defendant worked at the colliery at the time of the last reading, but witness could not speak positively as to whether he was present or not at the time they were read. The defendant, however, has absented himself without giving any notice.—Mr. Smith said, he should take four objections to the information:—1. That it did not appear on the face of it with whom the contract was made.—2. That the commencement and duration of the contract was not set out.—3. That, if there was a contract, it did not show that the defendant entered under it.—4. That it did not mention where the contract was made.—The bench, after hearing the objections and the arguments upon them, dismissed the information.—Mr. Smith appeared for three other pitmen at the same colliery, the informations against whom were also dismissed on the grounds.—*Gateshead Observer.*

MEETING OF COALMASTERS AT DUDLEY.—At a meeting of the coalmasters, held at the Stewponey, on Tuesday last, it was agreed that the prices of coal should continue in this district the same as last quarter—viz., 12s. best; 10s. common; 7s. lumps; 2s. fine slack, at the pit mouth.—*Birmingham Jour.*

NEW IRON BRIDGE.—Circumstances having of late directed a great deal of public attention to railway and other bridges, of iron structure, particularly the former, and shown that some of those formerly believed to have been made on a principle which ensured their safety, are really not so, it is important to know that further attempts are being made to construct bridges, which shall, to a much greater extent, combine safety with economy and simplicity. Yesterday we saw a model of one which is said to combine these important properties, and is now exhibiting at the Town-hall warehouse, Cross-street. It is a perfect arch, composed wholly of iron, is 22½ ft. long, 8 in. deep, 20 broad, and weighs about 6½ cwts. It combines the arch with the abutment bridge, and they can be used separately or together. All the tension parts are made of wrought-iron, and the compression parts of cast-iron. It is so constructed that the rafter and ring-post principle intersect throughout the whole of the structure; and there are chains at the bottom and centre for keeping the whole in a perfect state of tension, thus equally distributing the weight or pressure. The model now supports a weight of 50½ cwts. without having the abutments up; it, consequently, depends upon the chains entirely. We were told that, if the weight be taken off the centre of the arch, its curve would still be maintained without the slightest deviation: it possesses another important property—that of compensating itself against heat and cold.—*Manchester Examiner.*

RAILWAY SPEED INDICATOR.—An ingenious contrivance for registering the speed on railway trains, has, within the past week, been deposited in the Royal Polytechnic Institution. The apparatus is intended to prove the rate of travelling by railways, and also the time occupied by each stoppage at the various stations on the line. As a description of this invention might be acceptable to our readers, we give the following account:—The paper which is to receive the register, is a long slip, about one inch broad, and length proportioned to the time the train may be upon the journey. This paper is rolled upon a small cylinder in the first instance, and one end is made fast to a cylinder of larger size, about 8 or 9 in. in diameter; this cylinder is then made to revolve by means of a clock, attached to the apparatus—so that it turns round every half hour; consequently, about three-quarters of an inch of the paper passes any given point every minute; a pencil is now fixed to the upper part of the apparatus, so that it presses on the paper—consequently, as the paper moves round, would make a straight line upon it, were it not that the pencil itself had a lateral motion given to it. This arrangement is so attached to the train, that the pencil moves from one side of the paper to the other every quarter of a mile that the train travels. By this compound motion, a series of diagonal lines are produced upon the paper; the number of lines indicate time. As soon as the train arrives at a station, a straight line merely is produced; and, by observing the length of this line, it indicates how long the train was at the station. This apparatus is the invention of a gentleman named Ricardo.

BOSCAWEN ROSE.—At a meeting of adventurers, held at the mine, on the 27th September, the accounts were examined and passed; from which it appeared, that the costs for four months, ending August, amounted to 68*l.* 2s. 3d.; merchants' bills, 7*l.* 14s. 6d.; surgeon, 8s. 6d.; balance due to purser end of April, 32*l.* 13s. 7d.—98*l.* 18s. 10d.—By calls, 74*l.* 10s.—leaving balance against the adventurers of 24*l.* 8s. 10d. It was resolved, that a call of 10s. per share be made, to pay off the above balance, and for the further working the mine.

EAST POOL.—At a two-monthly meeting, held on the mine, the accounts were examined and passed, from which it appeared that the costs for August and September were 46*5l.* 11s. 3d.; merchants' bills, 231*l.* 19s. 10d.; balance of tribute subsist, &c., 226*l.* 15s. 4d.: together, 924*l.* 6s. 5d.—By copper ores sold 381*l.* 3s. 7d.; tin ditto, 417*l.* 14s. 7d.; water charge, 120*l.*; materials, 2*l.* 13s.—921*l.* 11s. 2d.—showing loss of 2*l.* 15s. 3d.; which, added to balance at last account, leaves balance against the mine of 494*l.* 9s. 3d. The following report was read:—The mine is paying cost, and likely to do so; a loss may appear next account by reason of the fall in the standard, and the reduced price of tin. The bottom end (the 100) is a large lode, but not rich. The 90 is much better. The 80 is suspended till a winze is enabled to be sunk to give air, and enable them to use the tram-rod, which will be a great saving.

WHEAL COMFORT.—A meeting of adventurers took place on the mine on Friday last, when the following accounts for June, July, August, and September, were allowed:—To costs and merchants' bills, 164*1l.* 5s. 8d.—By ores sold (less dues), 1434*l.* 1s. 8d.; Wheal Buller tributers' balances, 13*l.* 16s.—1447*l.* 17s. 8d.: balance against the mine, 193*l.* 8s.

WHEAL ENNIS.—At a meeting of adventurers, held at the mine, on Monday, September 27, the accounts were examined and passed; from which it appeared, that the costs for four months, ending Aug., amounted to 132*l.* 13d. 2d.; merchants' bills, 24*l.* 12s. 7d.; surgeon, 19s.; balance due purser end of April, 17*l.* 2s. 6d.—175*l.* 7s. 3d.—By calls, 93*l.*—leaving balance against the adventurers of 82*l.* 7s. 3d. It was resolved, that a call of 15s. per share be made, for paying the balance and the further prosecution of the undertaking.

BEACON MINE.—At a meeting of adventurers, held at the Union Hotel, in this town, on the 8th inst., the statement of the past five months' accounts was submitted, from which it appeared that the expenditure had been (including a balance from last account of 120*l.*) 323*l.* 3s. 4d.; and the receipts, 215*l.* 2s. 11d.—leaving a balance against the mine of 108*l.* 0s. 5d. It was resolved, that the affairs be wound up forthwith, and that a committee—consisting of the purser (Mr. Roscorla), Capt. John Carthew, Mr. J. N. R. Millet, and Mr. R. Pearce—be appointed, with full power, to dispose of the mine and materials.—*Penzance Jl.*

BERRALSTON.—The suspension of the East and South Tamar Mines are likely to be of a very short continuance; as we learn that arrangements are in course of being made, through the agency of P. N. Johnson, Esq., F.R.S., for the continuance of the mines. The proposals submitted we do not feel justified in naming, until the business is completed; but we trust that a new company will progress with renewed energy.

EAST WHEAL GOLDEN.—We understand this sett is about being worked by a respectable London company. It is situated on the course of the East Wheal-Rose lode, and adjoining, or surrounded by, some good old mines, including Wheal Rose, Wheal Shepherd, Wheal Metha, and the Old Penhale Mines.

WHEAL BARBARA.—We have been given to understand, that active measures are being taken for the erection of a steam-engine, so as to command the mine to a considerable depth, and thus render manual or horse-power unnecessary, thereby precluding any delays, such as noticed in the report which appears under our mining correspondence.

TRENANCE MINE, MULLION, CORNWALL.—We noticed, in a former Number, the unexampled produce of this mine, judging from the "prills" of some 3 or 4 cwts., yielding 80 to 90 per cent. of copper, which we had seen at the office of the company. We have again inspected the reports, and seen some additional stones of ore—or rather, we should say, of copper—which have been lately forwarded to London; one of these, weighing 320 lbs., but which we believe, when entire, was upwards of 400 lbs., is, on an average, nearly 6 inches in thickness, yielding fully 80 per cent. of copper. Indeed, we are given to understand, that the ore raised will produce 55 to 60 per cent., and may be set down as being worth 45*l.* per ton, the quantity being some 14 or 15 tons. The stone, to which we have made more particular reference, was broken from the Maria shaft (christened after the lady of one of the principal adventurers, and not fictitiously assuming that of the Devon sister), at a depth not exceeding 8 fathoms; the greatest depth to which the workings have been carried not exceeding 12 fms., although, we believe, the deepest point reached by the "old men" was 20 fms. No steam, or water, power is at present required, the workings being by means of a horse whim. The backs are allowed to stand—so that the mine may be opened and prosecuted in its working in a miner-like manner. We only wish that the same course was observed in all other instances, and a false value not raised by an improper course of working, with the view of realising profits, without looking to the mine, as to the lasting properties it might present, or the chance of continuous dividends.

WHEAL CURTIS MINE.—We are glad to find that the operations at this mine are progressing with every prospect of that success which the reports of the several agents encouraged the shareholders to expect. We find that the engine-shaft is down 13 fms.—the engine being 70-in. cylinder, from which flat-rods communicate with Crase's shaft, which is unwatered to a depth of 25 fms. by such means. In driving or exploring east and west, ore ground has been discovered, between the 20 and 30 fm. levels, of good produce, and from which early returns are expected; the extreme depth to which the mine appears to have been worked, is 47 fms. It is intended to put down the new engine-shaft to take the Wheal Curtis copper lode—the underlay of which is about 1½ ft. in a fathom south. It appears that another lode, but slightly altered in its direction, forms a junction with the Curtis lode in going west; and it is proposed to communicate, by means of flat-rods, between the engine-shaft and Polkington's shaft, when the lode has been seen at adit, and of good produce; but which cannot be prosecuted in depth until power be obtained for drawing the water below the present level, which is 15 fms. from surface: flat-rods are, however, at surface; and instructions have been given, whereby, doubtless, in the course of a week, or 10 days, the necessary appliances will be available for sinking down on the course of ore which is there seen. The engine-shaft is 13 ft. by 7 ft.; but only down 13 fms. from surface. This, however, will be prosecuted without loss of time, so as to command the eastern and western parts of the mine. Crase's shaft, which is down 25 fms., is calculated to take the lode at the 47 fm. level—while the engine-shaft has been placed in such a position, as not to take it until they reach the 90—cross-cuts, however, being put out in the interim. It will thus be seen that, in addition to the capacity of steam power acquired, the operations of the mine are steadily progressing with every prospect of returns, arising from the bunches or courses of ore already discovered—the main object being, to work them with as little cost as possible—and thus rendering it desirable that the several workings, having regard to ventilation, and to the easy extraction of the ores, should be prosecuted. These being once effected, if we are to judge from the reports of tical and experienced agents, little or no doubt can exist as to the beneficial prac-results attendant on the active working of the mine.

SOUTH AUSTRALIA.—We have received files of papers from South Australia to the 15th of May. The *South Australian Register* says:—"New riches have come to light in the heretofore unseen levels of the Burra Burra Mine. The new water whim had commenced working; by its aid, Stocks's shaft had been sunk something deeper, and in the course of the operation a magnificent lode of copper was laid open; in bigness, the course of ore occupied the full size of the shaft (10 ft. by 8½ ft.), but the magnitude and extent were yet to be ascertained. The confirmed success of the South Australian Mining Association's operations had given fresh courage to the representatives of the contiguous mine of 'Bon Accord,' otherwise known as the Sydney Company's mine. Mr. Moorhead, Capt. Spargo, and other *employés* of the company, had arrived on the property, and broke fresh ground, with a success which would justify and encourage extended operations forthwith. Nor is the work of adventitious discovery at an end: surface specimens, of great promise, have been found by a shepherd, upon Mr. Johnson's sheep-run—equal, it is said, to any found heretofore in South Australia, under similar circumstances."

BRAZILIAN MAIL.—The *Penguin* packet arrived at Falmouth, on Thursday morning, with despatches from Rio de Janeiro to Sept. 2; Bahia, Sept. 11; Pernambuco, Sept. 17. The exchange at the above ports ruled at from 27½ pence to ¾. On freight, about 10,000*l.* The late good report from the Banana Mine, as furnished by the *Antelope's* arrival, is fully confirmed.

DAVY'S VOLCANIC THEORY.—Potassium is lighter than water. It breaks into flame the moment it touches water or ice. If plunged into water there is no combustion, but hydrogen is discharged without turbulence or resistance. These remarkable, but far from anomalous, properties, suggested to the teeming mind of the electro-chemist Davy, the conjecture that the solid body of the world is composed of potassium and the metals that resemble it; and that volcanised eruptions are produced by the occasional incursion of the waters of the deep, or of great mountain tanks, on the still domain of these atlantic metals. The far greater part of the investigated crust of the earth is certainly composed of such oxidated metals, and the specific gravity of the whole globe is supposed to be less than that of even the rocks; so that it is at least possible that there may be more of sound prediction in this sublime conception than the majority are inclined to think.—*North British Review.*

THE LOST ÆRONAUT.—In the *Mining Journal*, of the 9th inst., we noticed the ascent of M. Lédet, a young Frenchman, at St. Petersburg, on the 12th ult., and that considerable alarm was felt, as his balloon had been found in the Lake of Ladoga, and it being feared that he had attempted to descend with the parachute. A letter from St. Petersburg, of the 5th inst., states that no intelligence of him had been received, and that his family were in the greatest distress.

THE SILVER AND GOLD MINES OF THE NEW WORLD.

SECOND PART.—ON THE FUTURE PROSPECTS OF THE MINES OF AMERICA, COMPARED WITH THOSE OF EUROPE.—NO. IX.

[*Concluded from last week's Mining Journal.*]

V. GENERAL PRODUCTION OF GOLD AND SILVER.

We can now try to form an idea of the quantity of precious metals which different countries yield to human industry. For Europe, we adopt the figures of 1300 kilogrammes of gold and 120,000 kilogrammes of silver. The division, with respect to the last-named metal, is as follows:—Northern Germany, 35,000 kilogrammes; Southern Germany, and its Danubian dependencies, 25,000 kilogrammes; Spain, 50,000; Scandinavian Isthmus, France, and other states, 10,000. We class the Russian Empire apart.

Table showing the Quantities of Gold and Silver produced annually in the World.

	SILVER.		GOLD.		
	Weight in kils.	Value in fr.	Weight in kils.	Value in fr.	Total value.
America	614,641	136,476,000	14,934	51,434,000	187,910,000
Europe	123,000	26,667,000	1,300	4,478,000	31,145,000
Russia	20,720	4,004,000	22,564	77,720,000	82,324,000
Africa	——	——	4,000	13,778,000	13,778,000
Archipelago of the Indian Sea	——	——	4,700	16,189,000	16,189,000
Various	20,000	4,444,000	1,000	3,444,000	7,888,000
Totals	775,361	172,191,000	48,498	167,043,000	339,233,000

We here count nothing for different countries, which are certainly producers of gold and silver. In China, and in the different parts of India, gold has been long extracted from the alluvious sands, to promote the splendour of princes and grandees, or for the metallic reserves which all the sovereigns of the East like to form. The accounts of travellers, who have been able to penetrate into Japan, are unanimous in attesting that the palace of the Emperor offers gold in profusion. The working of the mines, however, appears to have greatly slackened in that country. The estimates of M. Jacob, repeated by M. Berghaus, attribute to Southern Asia, including the Islands of the Indian Sea, 11,900 kilogrammes of gold, and, with Asiatic Turkey, 25,000 kilogrammes of silver. Deducting the Islands of the Indian Sea, and of Asiatic Turkey, which we have already taken into account, there would be 7200 kilogrammes of gold, and only about 14,000 kilogrammes of silver. If it should be thought right to take into account these quantities of the precious metals, which appear to me to be very hypothetical in their estimates, and of which the whole does not reach the general market of the world, we should arrive at the following results:—789,000 kilogrammes of silver, of the value of 175,333,000 fr.; 55,698 kilogrammes of gold, of the value of 191,843,000 fr.—total value of the two metals, 367,176,000 fr. Thus there would be 1 kilogramme of gold against 14 kilogrammes of silver. It is well worthy of remark that, at this present time, the production of gold represents a sum equal, and even superior, to the production of silver. It is a new fact in the general economy of civilisation. Nothing similar has been seen since the middle of the sixteenth century, and no one would have expected it 30 years ago.

The chain of the Andes on one side, and Asiatic Russia on the other, are the two principal sources of the precious metals. In the general production of the world, America furnishes 78 per cent. of the silver, and Boreal Russia 41 per cent. of the gold.

Here naturally arises a grand question, that of asking what becomes of all this silver, all this gold—where has passed all that the mines have yielded? This problem has long been agitated, particularly with respect to the silver and gold yielded by America; and, after all the discussions which have taken place, we are still confined to vague conjectures—to summary estimates. It is calculated, that there is in Europe a mass of monetary specie amounting to 8,000,000,000 fr., which is being perpetually renewed, and which is also being perpetually dipped into for the arts. The current of exchanges caused, for a very long time, large quantities of the silver of Europe and America to be conveyed to India and China. It was generally supposed, at the beginning of the century, that this was an annual exportation of 117,000,000 fr.—a sum really enormous, and probably exaggerated; but since then, the current, which till then had been incessant and only variable in its mass, first of all lessened—then suspended—its course, and then changed its direction. China sends us more silver than she receives from us, or, rather, it is gold that she sends us principally, by the intermediary of India. It was calculated, at the same period, that the Levant took from us every year 20,000,000 fr. in silver. The enterprise of France, in Algeria, causes a notable quantity to be absorbed there. The great precious metal producing countries, America and Russia, keep very little. It is not, therefore, what remains to them which can give the key to the destination which gold and silver receive. The fabrication of jewellery, and of silver plate, gold and silver gilding, absorb, and even cause to disappear, a part of the production—but what part? That is what people have in vain attempted to divine; for the tradesmen who use the precious metals, put indistinctly into their melting pots, the lingots which come from the countries of the mines, jewellery no longer in fashion, old table plate, and even money. We have an approximation to the total fabrication of articles in gold and silver by the tax, which, in France, is called *garantie*; but there results from it no certain clue, as to the employment of the annual production of the precious metals. The old or new articles which are melted for the manufacture of jewellery, and of all articles in gold and silver, for the use of Europe and North America, amount to more than 150,000,000 fr.; that is all that can be said with any plausibility. The wear of moneys, and the pieces of gold and silver which are lost by accident, by shipwreck, or otherwise, represent a deficit to be made up every year. It is more considerable than would be believed. Mr. M'Culloch is of opinion, that it should be put down at the 100th of the total mass of moneys. If there are 8,000,000,000 fr. in Europe, this would make an annual loss of 80,000,000 fr.—a figure which it is very difficult to admit. I quote here, with great reserve, all these statements. They are estimates deficient in certain bases—good only to show in what directions the sagacity of writers has exercised itself, when it desired to follow the precious metals, after they had been once cast on the general market.

I here conclude the cause of these observations on the precious metals. I leave to each reader the task of drawing the conclusion from them, and of interpreting them as he may please. They leave the field open to many conjectures. There is, however, one practical idea which I believe to be established by them—and that is, that in an interval, which it is impossible to determine exactly, but which may be very short, the value of one of the two precious metals, particularly silver, will, by the application of the arts and sciences, which we now possess, to the mines which now furnish the largest contingent—those of America—undergo a revolution, more or less, comparable to that which the discovery of the new continent produced three centuries ago.

INSTITUTION OF MECHANICAL ENGINEERS.—The next general meeting of the members of the Institution of Mechanical Engineers, is to be held in the Institution-rooms, Temple-buildings, New-street, Birmingham, on Wednesday next, the 27th inst., when the President, G. STEPHENSON, Esq., will take the chair.—Papers will be read on the following subjects:—On a Safety Break for Railway Carriages—On the practicability of effecting a Mechanical Communication between the Guards and Engine-drivers of Railway Trains—On Smith's Patent Steam Indicator, for Marine and other Boilers—On the Fan Blast (supplemental paper)—On Iron Suspension Bridges—On a Turn-table Lathe—On the Balancing of Railway Wheels—On a Steam Helve—On Boring Cylinders—On Locomotive Engines for Luggage Trains—On a Machine for Perforating Plates for Tubular Bridges, Boilers, &c.—On the application of Jones's Patent Gas Exhauster, as a Substitute for the Fan Blast.—We shall give a report of the proceedings in our next Journal.

IMPROVEMENT IN THE SCREW WINCH.—We have seen a new description of this useful tool, which has just been registered by Messrs. Smith and English, of Princes-street, Leicester-square, which, while it possesses all the powers and capabilities of the old screw-handle screw winch, can be applied in considerably less time, is equally effective, and much more economical. The fixed jaw and handle is the same as usual, only the latter has a serrated rack on its upper surface. The moveable jaw has a corresponding rack in the upper face of the slot, and is furnished at the bottom with a pin, which makes a quarter revolution—having on one portion of its circumference a flat surface, and worked by a trigger. When this flat surface is uppermost, the jaw slides easily; but, on depressing the trigger, the cylindrical face of the pin bites against the handle, and fixes the jaw by the aid of the two racks. It works with the greatest rapidity.

We hear that Capt. T. Warrington has invented a balance iron bridge, with the view of lessening the dead weight—the *vis inertiæ*—consequent on suspended iron bridges. He is the inventor of a ventilating apparatus for the instantaneous extraction of foul air and supply of fresh air to every corner of a mine, vessel, or building, for troops or cattle. It has been applied to several vessels and transports.

The opening of that section of the Cologne and Minden Railroad, which runs between Minden and Hamm, took place on the 15th, but without any ceremonies. This line will enable travellers to go direct by rail from Ostend and Paris to Berlin and Vienna, and in a very short time to Trieste.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 181½ 93½	Belgian Bonds, 4½ per Cent., 86 6
3 per Cent. Reduced Ann., 78½ ⅝	Dutch, 2½ per Cent., 53 2½
3 per Cent. Consols Ann., 79½ ⅝	Brazilian, 5 per Cents., —
3 per Cent. Annuities, —	Chilian, 6 per Cents., —
3½ per Cent. Ann., 79½ ⅝	Mexican, 5 per Cents., 17½ ⅝
Long Annuities, 8½	Spanish, 5 per Cents., 17
India Stock, 10½ per Cent., 224½ 22	Ditto 3 per Cents., 27½
3 per Cent. Consols for Acct., 80 ⅝	Portuguese, 5 per Cents., 74
Exchequer Bills, 1000*l.* 3d., 30 27 dis.	Russian, 5 per Cents., 105

MINES.—We are still labouring under the detoriating influence which continues to be so universally felt, by the present unprecedented pressure on the monetary market; and we have every reason to fear, that some time must necessarily elapse, before we regain that confidence and freedom of business which the mining share market possesses over the generality of others, from the systematic manner in which it is conducted. The fears of the timid as to the future and the wants or requirements of the necessitous, have thrown many shares of our best mines on the market, and which have been readily purchased by those who have more confidence in the stability of mining property, aided by the recommendation of intelligent and experienced brokers.

Perhaps no better opportunity ever has, or may be, again afforded for capitalists to invest in good dividend-paying mines, or in those on the eve of doing so. Were we to cast a cursory glance over the great mineral districts of the United Kingdom, we shall find the mines, with few exceptions in a decided state of improvement, or possessing encouragements highly interesting to adventurers. We, therefore, find some few who are gifted with the means of possessing, and the firmness of acquiring, a property, which will ultimately remunerate for a prudent decision, even in the present period of doubt, anxiety, and dread.

The Seton adventurers held their bi-monthly meeting on the 12th, when a dividend of 20*l.* per 99th share was declared, reserving a balance of 191*4l.* in hand.

Wheal Trehane account-meeting, for June and July, was held on the 12th, when a dividend of 20s. per 256th share was declared; after payment of which a balance of 414*l.* remained in the purser's hand. The report is of a highly satisfactory character, and intimates an increased dividend the next account.

The Alten Mining Association held their annual meeting yesterday, when a dividend of 5s. the 5000th share was declared.

We are advised, that a transaction is in course of negociation for a large number of shares in that extraordinary mine, the Great Devon Consols. In noticing this as one great movement of the week, we would observe that, although our quotation of the past week has been furnished at a much lower figure than any given number of shares can be procured, we have learned that such a price is quite in opposition to what will be obtained for the shares negociating for, as above referred to. It has been presumed by the many buyers that have appeared for these shares, within the past month, from a false calculation, that a number *must* come into the market; but we are assured that there is no *necessity* for a sale, and, consequently, no such depreciating price will be acceded to. We remark thus much to correct the mistaken notions that may be abroad; and we can further assure our friends, that the very last sale effected, bears the stamp for 499*l.*, as given 1-1024th share; and we, therefore, shall leave in future the quotation in our list blank, until we are advised of a sale having been effected.

The amount of actual business done throughout the week, has been insignificant, although inquires have been made for, and business done in, Treviskey and Barrier, Carn Brea, Trehane, Caradon Wheal Hooper, Trelawney, &c., &c.

Wheal Henry has been in request from the improvements lately made there; it is reported, that the lode in the winze, in the 100 fm. level, will produce six tons of copper ore to a fathom; and the winze for tin is worth 50*l.* per fm.

Tamar Consols annual meeting, held on Thursday, presented a very satisfactory report; the financial statements showed a balance of 896*l.* in favour of the company. We believe that the smelting department required some assistance from the mining profits—consequently, the actual amount of profits are not given in the above. The directors, by their perseverance and enterprising spirit, brought the north mine into a state of profit, whilst they have considered it advisable to suspend Wheal Hancock.

Great Wheal Martha adjourned meeting was held yesterday, when it was resolved to suspend operations for the present. All the preferential shares of 3*l.* are now taken; about 100 were unappropriated, which the directors have taken among themselves, being desirous of seeing the lode in the new mine in the 80 fm. level. A meeting will be convened as soon as the directors deem it convenient with their future arrangements.

In the foreign share market but few transactions have transpired, if we were to except the large number of the Australians which have been done within the last 10 days.

A great many Asturian shares have been pressed on the market during the week, and but little business done in them. The cause of these attempted forced sales arises from a notice having been given by the directors for the forfeiture of shares on which the calls have not been paid. We also learn, that the prospects of the company are of the most encouraging character.

Barossa Range Mining Company appears to be progressing in favour; and, from the reports lately received from the mines, we consider the property one of the most important in the colony of Australia. We copy the following extract from the *South Australian Gazette*:—"GREENOCK CREEK MINE.—This mine has been let by the proprietors to J. H. Angas, Esq., and Capt. Rodda, on behalf of an English company (the Barossa Range Mining Company), at a royalty of ⅛th dues. The lessees have already cut a lode of blue carbonate, nearly 4 ft. wide, and of great promise."

The North British Australasian Company (which, also, possesses the rich mineral lands of Kaw-aw) have been advised that some important discoveries have been made by their mining operations in Australia. We have not, as yet, received extracts from the official documents, but hope to give them next week.

By the East Indian Mail, we find that the metal markets of Calcutta and Bombay were in an improved state, and that British bar-iron had advanced in the latter market.

The Royal West Indian Mail steam-ship, *Clyde*, arrived at Southampton, on Thursday, bringing $ 5475, 224 ozs. gold, and 1094 ozs. silver.

The *Morning Chronicle* states, the Union Bank of Newcastle "has stopped payment—pulled down, it is said, by the consequences of a too close connection with the mining interests of the north of England." It will be borne in mind, that the "mining interests" here referred to are the collieries of the north.

A very general report has prevailed to-day, that the North and South Wales Bank had suspended payments; but we are happy to affirm that, on application to the London and Westminster Bank, we find the report unfounded. Such an event would prove most calamitous in its effects, as there are several branch banks in the principality.

RAILWAYS.—The sharemarket has throughout the week generally borne the same characteristics as has marked the two or three previous ones; on Monday, it commenced with unmitigated dullness, and prices, in some instances, went still lower. On Tuesday and Wednesday morning, so depressed was the state of the market, that it was next to impossible to give correct quotations; but in the afternoon, it rallied in an extraordinary manner, but declined again on Thursday. The market left off yesterday something better than at the commencement of the week, but at prices much below those of the previous one.

MEETINGS.—EAST LOTHIAN CENTRAL: for the re-election of the directors, which, after some opposition on technical points, was agreed to unanimously.—WEST FLANDERS: half-yearly: the main division of the line, from Bruges to Courtrai (33 miles), was opened on July 15. The total receipts had been 323,223*l.*, and the expenditure 306,878*l.*—leaving as balance, 16,344*l.*—DUBLIN AND KINGSTOWN: half-yearly: the net profit on the six months, was 9696*l.* 10s. 5d., from which a dividend was declared, amounting to 8577*l.*—TRINIDAD: meeting for dissolution, which was unanimously agreed to; the directors agreeing to pay 20s. per share, and meet all existing liabilities, with about 1500*l.*, which would be left in hand.—LONDONDERRY AND ENNISKILLEN: special: to inquire into the state of affairs: a committee of five appointed for that purpose.—NORTH WALES: special: unanimously resolved to dissolve the company, and there is about 23,000*l.* in hand.

HULL, THURSDAY.—Shares are lower in price, and more difficult to sell, than when we wrote last week. The failure of the Royal Bank of Liverpool, and the negative result of the Liverpool depatation of merchants, have had no tendency to improve matters. Consols touched 79¾ yesterday, but left off better at the close; and would the failures now cease, we should look with confidence to a rally in prices—but the market is too weak to sustain these continual announcements of mercantile disasters. It seems scarcely credible, that London and North-Western should have been done at 138½; Great Western at par; and London & Brighton, 37½; such, however, is the fact. Local stocks are quite neglected.

LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 22, 1847.

Article	£ s. £ s. d.	Article	£ s. £ s. d.
Iron—Bar a, Wales..ton	8 10— 8 12 6	Copper—Ord. bottoms ..	0 0— 0 0 12
,, ..London ..	0 0— 9 15 0	Yellow Metal Sheathing	0 0— 0 0 9½
Nail rods ,, ...	0 0—10 15 0	Tin—Com. blocks g ..cwt.	0 0— 4 5 0
Hoop(Staf.) ,, ...	0 0—11 15 0	,, bars	0 0— 4 6 0
Sheet ,, ...	0 0—13 0 0	Refined	0 0— 4 10 0
Bars ,, ,, ...	0 0—11 5 0	Straits h	4 0— 4 2 0
Welsh cold-blast foundry pig ..	4 10— 5 5 0	Banca	0 0— 4 4 0
		Tin-Plates—Ch., IC i, box	1 8— 1 10 0
Scotch pig b, Clyde	0 0— 3 0 0	,, IX ...	1 14— 1 16 0
Rails, average	8 10— 8 15 0	Coke, IC	0 0— 1 5 0
Chairs	5 10— 6 0 0	,, IX	0 0— 1 11 0
Russian, CCND c ..	0 0— ——	Lead—Sheet k ......ton	19 7 6 19 10 0
,, PSI	0 0— ——	Pig, refined	0 0—20 5 0
,, Gourieff	0 0— ——	,, common	0 0—18 10 0
,, Archangel	0 0—13 10 0	,, Spanish, in bd.	0 0—18 0 0
Swedish d, on the spot	0 0—11 5 0	Red........	0 0—19 10 0
,, Steel, fagt.	0 0—16 5 0	Dry White........	0 0—24 0 0
,, ,, kegs e	15 0—15 5 0	Shot (Patent)........	0 0—21 0 0
Copper—Tile f	0 0—97 0 0	Spelter—(Cake) l on spot	0 0—18 5 0
Tough cake	0 0—98 0 0	,, ,, for arrival	0 0— ——
Best selected	0 0 101 0 0	Zinc—(Sheet) m export.*	0 0— 27 0 0
Ordin. sheets, lb...	0 0— 0 0 11	Quicksilver n ....lb.	0 0— 0 4 6

a Discount 2½ per cent. b Net cash. c Discount 2½ per cent. d Ditto e In kegs ½ and ¼-inch. f Discount 3 per cent. g Ditto 2½ per cent. h Net cash in bond. i Discount 3 per cent. k Ditto 2½ per cent. l Net cash. m Discount 1½ per cent. n Discount 1½ per cent. * For home use it is 32l. per ton.

[*From our Correspondent.*]

This has been another dull week in metals, no sales of any consequence having been made.—Iron—Welsh bars are a shade lower; a small parcel of Swedes has been sold at 11l., ex-ship.—Copper is steady; some of the Chilian ingots have moved off at 90l., but 200 tons are still on the market.—Tin.—English and Foreign very dull of sale; the few orders on hand are withheld in expectation of lower prices.—Spelter is a shade lower than last week; the dealers are sellers at 18l., and about 90 tons in second hands were sold on Wednesday at 17l. 17s.

GLASGOW PIG-IRON TRADE, Oct. 20.—Our pig-iron market is exceedingly dull thi week: there is so little disposition shown to buy, that holders have been obliged still further to reduce their prices. The price of mixed Nos. may to-day be quoted at 57s. 6d.—cash.

BIRMINGHAM, Thursday.—There is no change to report this week. Stocks are low; the trade is still unaffected by the crisis, and were it not for the high rate of discount, the great premium which cash demands, and the little extra credit which, in some instances, is taken, the pressure would not be felt. This state of things the *Times* would induce its readers to believe is owing solely to the demand for iron for railway purposes; but, in fact, the makers of iron in this district for railway purposes are comparatively few. The generality of the iron-works are principally engaged in making other sorts of iron, for which there is a good and legitimate demand, both at home and on the continent. It is, therefore, not entirely owing to the demand for railway purposes that the iron-works are flourishing, while others are decaying.—*Birmingham Advertiser.*

BOMBAY, Sept. 10.—British Bar Iron continues in request, and a further advance could be obtained, but holders are indisposed to sell. The stock in first and second hands is now reduced to about 10,000 candies; and for a good assortment 40 rs. per candy would, no doubt, be given. Swedish does not participate in the advance, and is of dull sale. Other descriptions of iron are without change, and no transactions in any of them have transpired. In Copper, nothing that we are aware of, has been done, and prices are stationary, notwithstanding that the supplies here and on the way out are very moderate. In Lead, Spelter, or Tin-Plates, we have not heard of any transactions, and they continue as before reported; the last-named article is very scarce. Swedish Steel in tubs has been sold to the extent of 1000 cwts., at 9½ rs. per cwt.

CALCUTTA, Sept. 7.—The Copper market has remained very firm, with a decided upward tendency. The stock of sheathing is small, and an advance of 8 annas per maund has taken place, with the prospect of further improvement. Tile is rather wanted—the stock, both here and at Mirzapore, being at present adequate to the wants of the trade. It is held at 34 sa. rs. per f. md. Nails are very high, and would command 5 Co.'s rs. per f. md. There has been some inquiry for Spelter; and though the chief holders at present refuse to sell, transactions to a moderate extent have taken place at gradually advancing rates, the present value being 11 2 Co.'s rs. per f. md. There has been a fair inquiry for all descriptions of Iron, at about our last quotations. The value of Swedish Steel is still low—viz., 6 to 6-2 Co.'s rs. per f. md., at which sales of 2200 tubs have been made Lead without any report of sales. The value of sheet is 8 sa. rs.; of pig, 6-10 sa. rs. per f. md. There has been a good demand for Tin-Plates, and stock being much reduced, prices have advanced considerably, and for several small parcels 25 to 29 Co.'s rs. have been paid for IC. The present value is 22 Co.'s rs. per box. Quicksilver is without change. Value, 4-2 to 5-6 Ct. rs. per f. seer. In Block Tin sales have been to a fair extent of Straits, at 33-4 to 33-8 Ct. rs. per f. md.

CANTON, Aug. 20.—On account of the continued small imports of Iron, transactions have been very limited. Nailrod and hoop are still quoted at $4 to $4 20 c.: bar has declined to $3 30 c. to $3 40 c. per picul. In Tin-Plates no sales; $7 50 c. to $8 per box. Lead, $7 per picul.

EXPORTATION of the PRECIOUS METALS.—The following are the official return of the exports of gold and silver from the port of London for the last week:—

Silver bars to Hamburgh .... 20,000 ounces.
Gold coin to ditto .... 150 ,,

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars ....per oz.	£3 17 9	New dollars ....per oz.	£0 4 9½
,, Portugal pieces....	0 0 0	Silver in bars (standard)	0 4 11½

NEW PATENTS.

E. Tattersall, Newmarket, land-surveyor, for improvements in making communications from one part of a railway train to another.

J. Ridgway, Cauldon-place, Stafford, for improvements in the manufacture of paste-boxes, and other similar articles in china and earthenware, or other plastic materials.

T. Forster, Streatham, Surrey, manufacturer, for improvements in combining gutta percha with certain materials, and in the application thereof to waterproofing fabrics, and in moulding various articles therefrom, in finishing the surface of articles made from gutta percha, or gutta percha combined with other materials, and in cleansing gutta percha.

R. R. Banks, Great George-street, Westminster, architect, for a new method of artificially curing and preserving the berries of coffee by a drying apparatus.

J. Neville, Walworth, Surrey, civil engineer, for certain improvements for conveying goods and passengers on railroads, parts of such improvements being applicable for working or driving other descriptions of machinery.

B. Smith, Birmingham, manufacturer, and R. F. Burges, of the same place, manufacturer, for a certain improvement, or certain improvements, in apparatus for filtering.

C. H. Sloman, St. Martin's-lane, Middlesex, for certain improvements in apparatus used for ironing.

W. G. Gard, Calstock, Cornwall, engineer, for certain improvements in machinery or implements for boring and sinking.

R. Shaw, Golds-green, West Bromwich, Stafford, for improvements in the manufacture of wrought iron railway bars and railway chairs.

P. Playfair, merchant, and L. Hill, jun., civil engineer, for improvements in the manufacture of sugars.—*Mechanics' Magazine.*

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£179,939	26	4 p.c.	£170	£176
Chester and Birkenhead	15	706,793	39½	—	877	705
Dublin and Drogheda	35	733,655	53	3½	806	754
Dublin and Kingstown	7½	473,282	—	9	864	932
Dundee, Perth, and Aberdeen	36½	285,745	35	6	818	305
East Lancashire	24	1,207,490	14	—	906	696
Eastern Counties	202½	7,698,370	15½	5	12749	10100
Eastern Union	43½	979,926	60	—	1163	408
Edinburgh and Glasgow	48	2,375,745	47	6	4041	4278
Edinburgh and Northern	—	—	—	—	670	2857
Glasgow, Paisley, and Ayr	60½	1,890,547	121	7	2703	2306
Glasgow, Paisley, & Greenock	23	838,964	18½	3	1202	988
Gt. Southern & Western, Ireland	110½	1,876,326	23½	—	2150	1081
Great Western	240½	10,630,763	90	8	20909	20056
Kendal and Windermere	10½	147,001	24½	—	154	—
Lancaster and Carlisle	70	1,291,913	58	—	1406	—
Lancashire and Yorkshire	92½	6,087,314	76	7	9931	9932
London and North Western	382	20,010,467	135	9	43505	42059
London and Blackwall	4	1,146,289	5	½	932	840
London, Brighton, & South Coast	147	5,659,180	40½	4	9555	8328
London and South-Western	186	5,836,132	54½	9	6678	6813
Londonderry and Enniskillen	14½	160,013	24½	—	121	—
Manchester, Sheffield, & Lincolnsh.	49½	2,078,135	89	5	2342	1812
Maryport and Carlisle	28	424,417	—	5	664	475
Midland Company	382	8,658,604	104	7	22862	19067
Midland Great Western (Irish)	26½	583,776	—	—	1058	—
Newcastle and Carlisle	65	1,184,080	116	5½	2181	2012
Norfolk	70½	1,375,633	84	6	2093	1553
North British	78	2,514,150	23½	5	2481	1208
Shrewsbury and Chester	17	591,158	21½	—	630	—
South Devon	29	1,339,860	28	—	803	360
South-Eastern	157½	6,398,218	26	6	10981	9460
Taff Vale	38	785,607	—	5½	1815	1303
Ulster	25	646,211	52	6	811	754
Whitehaven Junction	—	130,000	—	4	184	—
York, Newcastle, & Berwick	236½	3,685,102	29½	9	11569	7815
York and North Midland	196	3,196,869	66½	10	9742	7069
FOREIGN RAILWAYS.						
Amiens to Abbeville	28	573,238	—	4	651	—
Antwerp to Ghent (three weeks)	31	——	—	—	933	—
Belgian	—	——	—	—	60399	58777
Dutch Rhenish	57½	——	2½	—	1075	1009
Northern of France	211	2,000,000	10½	4	14912	10459
Orleans to Bourges (Central)	70	——	—	—	2564	—
Orleans to Tours	72	600,000	—	5	4057	3603
Paris and Orleans	82	2,011,720	44	12½	9083	9310
Paris and Rouen	85	2,082,916	33½	9½	7609	7119
Rouen and Havre	59½	——	19½	4	2830	—
Strasburgh and Basle (monthly)	88	——	8	1½	9080	10227
West Flanders (ditto)	—	——	—	—	1615	—

Total earnings for last week, £196,190, being an increase of £29,960 over last year.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Oct. 16, was 15,912; amount of money, £65 17s. 8d.

POSTPONED SALE.—EAST COOMBE MINE.—NOTICE.—The materials on the above mine will NOT be sold on the 27th inst., as advertised. Due notice will be given when the sale is to take place.

GEORGE CHOWEN, Purser.

East Coombe Mine, Swymbridge, Devon, Oct. 22, 1847.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	30
256	Alternum Consols	2	12
235	Andrew and Nangiles	28½	11½
10000	Ayrshire Iron Company	5	3
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	10
4000	Bedford	2½	3½
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	24½	—
6000	Blaenavon	50	20
100	Botallack	175	80
120	Brewer	5	7
10000	British Iron, New, regis.	10	10
—	Ditto ditto, scrip	10	12
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwlch Cwmerfin	20	—
128	Callestock	17	30
1000	Callington	19	34
20000	Cameron's Steam Coal	4	3¾–⅞
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	17
256	Caradon United	24	5
256	Caradon Wh. Hooper	20	12
1000	Carn Brea	15	102½
2048	Carmarthen Consols	2	3
2048	Cascade	1	2
112	Charlestown	200	100
166	Cleveland	9	10
512	Coatlithe Hill	½	2
1900	Combmartin	7½	3
500	Comblawn	½	6
128	Comfort	45	100
256	Condurrow	20	33
2560	Cook's Kitchen	14	2
2048	Coombe Tin Mine	4½	4½–5
1000	Coombe Valley Quarry	1½	2
1000	Copper Bottom	1	5
1024	Cosheen	4½	20
240	Craddock Moor	15½	15
128	Creeg Braws	120	100
500	Cubert Mine	12½	15
2048	Dartmoor Consols	2	2½
7500	Demelza Mines	2	2
7100	Derwent	8½	5
1024	Devon & Courtenay Con.	7½	2½
1024	Devon Great Consols	1	—
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12½
256	East Alvenney	12½	40–50
112	East Caradon	42	42
2048	East Crowndale	4½	4
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	50
100	East Relistian	22	40
9000	East Tamar Consols	1½	2
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	125
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1300
2048	East Wh. Rough Tor	½	2
—	East of Scotland Iron Co.	2½	1
123	East Wheal Seton	14	20
256	Elborough	1½	2
256	Exmoor Wh. Eliza	3½	10
512	Fowey Consols	40	45
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	2	1½
2048	Georgia Tin Mines	1½	1½
256	Gonamena	31½	45
128	Goonvrea	4	1½
244½	Grambler & St. Aubyn	—	12
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	5	15
512	Gt. Wh. Rough Tor Con.	6½	21
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	7	18
1000	Harrowbarrow Old Mine	8½	2
6000	Heignston Down Con.	½	2½
256	Herodscombe	2½	10
256	Herodsfoot	14	20
10000	Hibernian	12½	1½
239	Hobb's Hill	6	3
1000	Holmbush	19	10
827	Kirkcudbrightshire	5½	7
2048	Lamherooe Wh. Maria	11	3
128	Lelant Consols	90	60
160	Levant	—	90
1000	Lewis	15	6½
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	60–65
256	Lostwithiel Consols	15	15
6000	Marke Valley	10	1
5000	Mendip Hills	2½	1½
5000	Merionethshire Slate & Slate Slab Co.	1½	2½–2½
20000	Mining Co. of Ireland	7	7½
256	New East Crowndale	3½	3½
128	North Fowey Consols	30	30
100	North Pool	45	370
70	North Roskear	10½	300
512	North Treburget	2	3
100	North United	72	15
256	North Wh. Abraham	½	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	8
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
128	Par Consols	900	1000
4000	Pennant	1½	2
100	Penrhiw	30	65
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	15
512	Plymouth Wh. Yeoland	4½	25
256	Polsaith Consols	3	5½
112	Providence Mines	35	45
256	Redruth Consols	3	2
10000	Rhymney Iron	50	30
10000	Ditto New	7	6½
256	Rose Consols	10	2
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
—	Shotts Iron Company	50	60
2500	Silver Valley	5	2
1024	South Callington	5	5–6
128	South Caradon	10	450

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
1100	South Dolcoath	3	2½
256	Sth. Friendsh. Wh. Ann	16	25
200	South Harvannah	10	25
9000	South Tamar	½	½
256	South Tolgus	7½	35
800	South Towan	10	1½
256	South Trelawney	15½	7
128	South Yeoland	16½	20
128	South Wheal Basset	110	75
124	South Wh. Francis	160	210
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	11½	1
256	South Wh. Sophia	4	4½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	80	40
256	St. Austell Consols	9	10
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
1000	Stray Park	43	24
9600	Tamar Consols	3	5
1024	Tavy Consols	3½	3½
6000	Tincroft	7	8
1000	Tin Vale Consols	2	2½
128	Tokenbury	143½	10
256	Trehane	2	25
5000	Treleigh Consols	6	4
2000	Trenance	2	50
96	Tresavean	10	250
120	Trethellan	5	16
120	Treviskey and Barrier	130	155
288	Trevean	½	30
256	Trewollack	20	—
128	Trewellard	12	26½
100	United Mines	300	350
256	Wellington Mines	15	30
128	West Basset	45	22
256	West Caradon	20	140
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
256	West Providence	1	20
200	West Seton	40	130
—	West of Scotland Iron Co.	210	210
120	West Trethellan	5	35
256	West United Hills	2½	4
256	West Wh. Friendship	8	3
3845	West Wheal Jewel	11	1½
2560	West Wh. Maria	2½	1½
2560	West Wheal Rough Tor	½	2
256	West Wheal Shepherd	5	2½
256	West Wheal Tolgus	21½	3
256	West Wheal Treasury	19	10
5200	Wicklow Copper	5	11½–¾
184	Wheal Adams	41	10
1000	Wheal Agar	—	10
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	2	5
237	Wheal Anderton	16½	26
128	Wheal Ann	—	50½
512	Wheal Ann, Bridford	1	2
512	Wheal Anna Maria	—	5
128	Wheal Arvose	3½	5
1024	Wheal Ash	3	12
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	4–5
256	Wheal Benny	8½	5
256	Wheal Blencowe	8	5
256	Wheal Bucketts	20	18
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
128	Wheal Courtenay	—	20
6000	Wheal Curtis	2	2½
256	Wheal Dyke	12	13
256	Wheal Fortescue	6½	8
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	32
1024	Wheal Grace	3	2½
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
256	Wheal Louisa	8½	8
112	Wheal Margaret	79	250
256	Wheal Maria (Hayle)	24	10
4000	Wheal Martha Consols	5	—
512	Wheal Mary Ann	5	20
256	Wheal Mary Consols	38	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
210	Wheal Prospect	4	7
120	Wheal Reeth	27	80
128	Wheal Rose	60	45
2048	Wheal Samson	—	20
99	Wheal Seton	214	1100
256	Wheal Sisters	29½	20
256	Wheal Sophia	4½	10
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	85–90
256	Wh. Tremaine (St. Ervan)	1½	20
256	Wheal Tremayne	35	20
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	265
128	Wheal Venland	13½	4
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvyan	—	60
256	Wheal Williams	6	6

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	3½
15000	Asturian Mining Co.	11	6
20000	Australian	2	2½–3
10000	Anglo-Mexican Co.	100	2
12374	Ditto Subscription	25	2½
3000	Bolanos	150	4
2000	Ditto Scrip	15	4½
12000	Brazilian Imperial	22	6
10000	Cobre Copper Co.	40	18
8500	Colombian Co. regis.	55	1
5000	Ditto Scrip	5½	(1)
5000	Copiapo Mining Co.	14	2½
10000	General Mining Ass'n.	20	14
5000	Kinzigthal Mining Ass.	2	2½
20051	Mexican Company	59	—
2000	Mexican & South Amer.	7	1½
5000	Mocaubas & Cocaes	25	6–6½
29320	Rl. del Monte, regis. / Ditto unregistered	28½	av. 3
	Ditto Red Debentures	—	10
	Ditto Black ditto	—	8
	Ditto Loan Notes	150	60
7000	Royal Santiago	10	6
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	7
13174	United Mexican	28½	1½

SOUTH AUSTRALIA AND NEW ZEALAND.

Shares.	Company.	Paid.	Price.
100000	North British Australasian (Kaw-aw, &c.)	1	1

**** We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 17 6—Bate's West Hartley 20 6—Dean's Primrose 18 6—Hasting's Hartley 20 9—New Tanfield 16 6—Original Pontop 17—Ravensworth's West Hartley 20 6—Stewart's Hartley 18—Townley 18—Cowpen Hartley 20 9—Morgan's Stone Coal 20—Sidney's Hartley 20 9—Wall's End Killingworth 20 3—Barnard 19—Bell and Brown 20 9—Hotspur 20—Hilda 20 3—Riddell's 20 9—Wharncliffe 20 9—Belmont 21 3—Braddyll's Hetton 22—Bell 21 6—East Hetton 20 6—Haswell 22—Hetton 22—Lambton 21 9—Morrison 20—Russell's Hetton 21 9—Stewart's 22—Kelloe 22—Leasingthorne 21 6—Thornley 20 6 to 20 9—Adelaide Tees 21 6—South Durham 20 6—Seymour Tees 20 9—Tees 21 9—West Tees 19 6—Ships at market, 93; sold, 69; unsold, 24.

WEDNESDAY.—Adair's Main 17 6—Carr's Hartley 20 6—Chester Main 18 6—Holywell Main 19 6—New Tanfield 16 6—Original Pontop 17—Ord's Redheugh 17 6—Townley 18—Morgan's Stone Coal 20—Sidney's Hartley 20 6—Wall's End Bewicke and Co. 20 3—Gosforth 20 3—Heaton 20 3—Belmont 21 3—Bell 21 3—East Hetton 20 3—Haswell 22—Hetton 22—Keepier 21 6—Stewart's 22—Whitwell 20 6—Hudson's Hartlepool 21—Tees 21 9.—Ships at market, 63; sold, 43; unsold, 20.

FRIDAY.—Buddle's West Hartley 19 9—Carr's Hartley 19 9—Chester Main 18 6—South Peareth 17—Tanfield Moor 16—Wylam 18 6—Wall's End Bell Robson 19—Gosforth 20—Hotspur 19—Hebburn 19 3—Killingworth 20 3—Belmont 21—Braddyll's Hetton 21—East Hetton 19 9—Haswell 21 6—Hetton 21 6—Keepier 21—Lambton 21—South Durham 20—Tees 21 3—West Hartley Netherton 19 9—Sidney's Hartley 19 9.—Ships at market, 79; sold, 68; unsold, 11.

Old Sheathing.—It has been decided by the revenue authorities that old metal sheathing, stripped from British vessels, in foreign ports, is entitled to be admitted free of duty, on the same terms as apply to old copper sheathing similarly circumstanced. A vessel, recently arrived from abroad, has brought a quantity of this old metal sheathing, stripped from her in a foreign port, from which she has returned, and is about to be re-coppered and re-sheathed; and on application from the master, who was also the owner of the vessel, in which it appeared that the sheathing had not changed hands, but had continued to be his property, to which effect he was competent to make declaration, permission has been given for its delivery, duty free.

Force of the Sea.—The force of the waves at the Bell Rock during the late gale from the south-east, as indicated by the marine dynamometer (records of which are daily registered), was 2874 lbs., or upwards of one-fourth of a ton, per superficial foot, being the greatest result obtained since October, 1844, when a nearly similar force was indicated.—*Caledonian Mercury.*

CORNISH STEAM-ENGINES.

The number of pumping-engines reported for the month of Sept. is 28—the quantity of coals consumed being 1990 tons, lifting, in the aggregate, 18,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 53,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal. The following have exceeded the average:—

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch on pist.	Strokes per min.	Consump. of coal in bus.	Million lbs. lifted 1 foot by consump. of 1 bush. coal	Average quantity of water per min.
Wh. Prosper	Western, 80-in.	9·7	94,275	15·0	6·1	4056	55·6	—
Great Work	Leeds's 60-inch	9·0	47,020	12·9	7·6	2301	56·6	180
Poldice	Sims's 85-in.	10·0	82,040	10·1	5·9	3064	56·4	418
United Mines	Taylor's 85-in.	11·0	97,108	15·5	5·3	3041	86·5	}
Ditto	Cardoza's 90-in.	9·0	99,468	13·7	5·6	3810	58·4	1297
Ditto	Eldon's 30-inch	9·0	13,631	16·0	8·1	608	69·2	}
Ditto	Hocking's 85-in	10·0	100,358	14·8	5·6	3880	61·7	}
East Wh. Rose	Penrose's 70 in.	10·0	53,650	12·5	3·4	1428	57·4	490
Ditto	Michell's 70 in.	10·0	60,856	14·2	3·8	1543	66·7	}
Wh. Mary Con.	,, 63-in.	8·66	29,057	9·3	5·0	1135	54·5	211

LEAD ORES.

Mines.	Tons.	Amount.	Purchasers.
Sold in London.			
Callington Mines	103	£18 8 6	Tamar Company.
East Tamar Consols	40	11 12 6	ditto
Sold at Holywell.			
Macsyrerwdder	36	£9 6 0	Newton, Keates, & Co.
ditto	17½	10 0 0	Mather & Co.
Coetia Llys	6½	10 2 6	ditto
Milwr	7½	9 16 0	ditto
ditto	2½	10 2 6	ditto
Hendre	80	9 12 0	ditto
ditto	41	9 1 0	Newton, Keates, & Co.
Deep Level	103	9 10 0	Walker, Parker, & Co.
Fronfownog	40	9 15 0	ditto
ditto	40	9 15 0	Mather & Co.
ditto	20	11 1 0	ditto
Penybryn	6	8 17 6	Newton, Keates, & Co.
Sold at Aberys'with.			
Goginan	42	13 9 6	Newton, Keates, & Co.
ditto	78	13 15 6	ditto
Frongoch	50	9 18 9	Riddle & Co.
Sold on the Mine.			
East Wheal Rose	82	£12 9 0	Tamar Company.
ditto	63	11 12 0	J. T. Treffry.
ditto	51	12 12 0	Tamar Company.

BLACK TIN.

Mines.	Tons.	Price per ton.	Purchasers.
Birch Tor	7½	£41 5 0	Calenick Smelting Co.
St. Agnes Consols	14	43 2 6	Daubuz; Calenick; Williams.
ditto	1	24 10 0	Williams and Co.

COPPER ORES.

Sampled Oct. 6, and Sold at Andrew's Hotel, Redruth, Oct. 21, 1847.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Cons. / Wh. Josiah }	130	£6 16 6	West Caradon	59	£6 2 0
			ditto	46	10 3 0
ditto	127	6 18 6	ditto	24	3 13 0
ditto	110	5 1 6	Fowey Consols	93	6 8 6
ditto	109	4 19 6	ditto	88	6 6 0
ditto	105	7 19 6	ditto	82	6 19 6
ditto	76	7 4 0	Wh. Friendship	109	7 12 0
ditto	72	4 8 6	ditto	70	9 18 0
ditto	33	6 18 6	ditto	66	10 14 6
Wh. Maria	136	5 13 0	Marke Valley	140	3 0 6
ditto	120	6 4 0	ditto	90	3 1 0
ditto	67	4 7 6	West. Wh. Jewel	64	3 4 6
ditto	56	6 15 0	ditto	60	4 7 0
ditto	13	2 6 0	ditto	50	4 14 0
Wh. Fanny	104	6 7 0	Bedford United	117	10 12 6
ditto	88	6 1 6	Holmbush	84	5 7 6
ditto	49	5 3 6	Ting Tang	30	2 14 6
ditto	21	6 7 6	Gonamena	27	8 15 0
West Caradon	93	6 5 0	Wh. Gorland	19	4 1 0
ditto	63	6 7 6	Hawkmoor	7	3 3 6

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Devon Gt. Cons., Wh. Josiah, Wh. Maria, Wh. Fanny }	1416	£8704 16 6	West Wh. Jewel	174	£702 8 0
			Bedford United	117	1243 2 6
			Holmbush	84	451 10 0
			Ting Tang	30	81 15 0
West Caradon	285	1897 5 6	Gonamena	27	236 5 0
Fowey Consols	263	1723 17 6	Wh. Gorland	19	76 10 0
Wh. Friendship	245	2229 5 0	Hawkmoor	7	22 4 6
Marke Valley	230	698 0 0			

Average Standard ....£ 91 7 0 | Average Produce 9½
Average Price per ton £6 5 0
Quantity of Ore .... 2897 tons. | Quantity of Fine Copper, 284 tons 19 cwts.
Amount of Money £18,067 8 6
LAST SALE.—Average Standard..........£ 94 10 0.—Average Produce 9½

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	88½	£285 15 0
English Copper Company	222	[illegible]91 11 0
Vivian and Sons	612½	[illegible]99 10 0
Freeman and Co.	328½	2218 19 9
P. Grenfell and Sons	182	966 17 0
Crown Copper Company	128½	833 6 3
Sims, Willyams, and Co.	425½	2723 19 3
Williams, Foster, and Co.	909½	5817 10 3
Total tons	2897	£18,067 8 6

Copper ores for sale on Thursday next, at Farquharson's Hotel, Truro.—Mines and Parcels.—United Mines 1200—South Caradon 350—Par Consols 293—Tresavean 247—Creeg Braws 180—Treleigh Consols 163—Wheal Brewer 115—South Tolgus 71—West Trethellan 51—Wheal Mary Consols 46—North Downs 16—Wheal Unity Wood 11—East Downs 7—Wheal Tolgus 4—Pembroke 1.—Total, 2755 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—North Roskear 924—Consolidated Mines 598—Tincroft 458—Fowey Consols 268—Wheal Seton 267—South Wheal Francis 221—South Roskear 168—Lanivet Consols 88—South Wheal Basset 65—Wheal Harriet 57—Wheal Vyvyan 39—Wheal Henry 30—Treloil 20.—Total, 3203 tons.

COPPER ORES.

Sampled Sept. 29, and Sold at Swansea, Oct. 21, 1847.

Mines.	Tons.	Prod.	Stand.	Price.	Mines.	Tons.	Prod.	Stand.	Price.
Cobre	110	14	88	£10 1 0	Cobre	84	23½	79	£16 6 0
ditto	102	14	88½	10 3 0	ditto	64	22½	80½	16 2 0
ditto	101	14½	87	10 5 0	ditto	38	18½	82½	12 15 6
ditto	97	14	89	10 4 0	Burra Burra	57	37½	84½	29 3 6
ditto	77	14½	88½	10 4 0	ditto	47	35½	85½	28 0 0
ditto	40	13½	88½	10 1 0	ditto	29	32½	85	25 11 0
ditto	103	14	85½	9 14 6	Copiapo	95	27½	83½	20 18 0
ditto	102	14½	86½	10 1 6	Berehaven	92	9½	95½	6 11 6
ditto	101	13½	87½	9 15 6	Vine Slag	13	3½	114½	1 15 0
ditto	96	13½	85½	9 9 6	ditto	9	3½	114½	1 15 0
ditto	85	23½	80	16 11 0					

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Cobre	1200	£13570 17 0	Berehaven	92	£604 18 0
Burra Burra	133	3719 18 6	Vine Slag	22	38 10 0
Copiapo	95	1985 10 0			

Total tons, 1542.—Amount of money, £19,919 13s. 6d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Mines.	Tons.	Amount.
Freeman and Co.	130	1090 7 0
P. Grenfell and Sons	96	909 12 0
Sims, Willyams, and Co.	241	3751 7 6
Vivian and Sons	596	6707 7 0
Williams, Foster, and Co.	479	7461 0 0
Total tons	1542	£19,919 13 6

Copper ores for sale Nov. 4.—Copiapo 93, ditto 92, ditto 90, ditto 89.—Berehaven 101, ditto 103, ditto (Kellogue), 92.—Cobre 87, ditto 77, ditto 41, ditto 37.—Knockmahon 100, ditto 61.—Burra Burra 80, ditto 54, ditto 35, ditto 24.—New Zealand 30.—Burra Burra 26.—Total, 1318 tons.

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

Mendip Hills Mine.—"A Constant Reader" should, in fairness, address the committee of management respecting the charges he complains of—and which, we should hope, would meet proper attention: perhaps, be explained to his satisfaction. Should such not prove the case, we will then publish his letter, and which "A Constant Reader" should follow up, by attending the next meeting, and reiterating his statement in presence of directors and shareholders.

Lamberdor Wheal Maria.—"One of the Victims of King-street Management" should follow the course recommended in the preceding notice. If such neglect, on the part of the mine agent, be proved to exist, surely the London management would, at once, exert themselves in the matter, and replace him by one more honest, and more competent to protect and superintend their property. In both these letters, charges are stated to be made for duties performed at the mines, which are so preposterous, that we feel assured it requires but the attention of the directors to be drawn thereto, to be immediately rectified.

East Caradon Mine.—We have also received a letter from "An Adventurer" in this mine, detailing practices, on the part of Capt. James Clymo, which, as an honest man, he should inquire into, and, if true, openly expose, in justice to all parties, either as interested with himself, or in the South Caradon or Wheal Gill Companies.

"Feirianyd" (Glanybala, Llanberis).—The methods generally adopted for replacing locomotive engines, tenders, and carriages, on the rails, after an accident, which has thrown them off, is far more effectual than the plan recommended by our correspondent (who has enclosed two rough models) could possibly be, and equally simple. There is nothing whatever new in the suggestion.

"A Traveller," on Mining in Anglesey—"A Well-wisher," on Mining in Ireland—Mr. Sweetlove, on the Ventilation of Coal Mines—Dr. Jamieson, on the Ventilation of Mines, to Prevent Accidents from Explosions by Gas; and several other communications, are unavoidably postponed.

Erratum.—In the article, in last week's Journal, on "Cement for Building Purposes," 12*l.* per barrel was printed, instead of 12*s.*

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

Grand Congress of Science at Venice.

We have received a detailed report of the proceedings at this great assemblage of foreign *savans*—conducted on a somewhat similar principle to our British Association—presenting a comprehensive view of the progress of science on the continent, and which created a great sensation the three weeks of its duration. The publication will commence in our next Number, and be continued weekly, until completed.

Glossary of Mining Terms.

In the course of a few weeks, we intend publishing, as a Supplement, an Entire Glossary of English and Foreign Mining Terms.—Subscribers and others wishing for copies of this Number, had better forward their orders, through their agents, to prevent disappointment: the charge for the Journal and Supplement will be Sixpence.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, OCTOBER 23, 1847.

Having been favoured, by Mr. R. Hunt, keeper of mining records in the Museum of Practical Geology, with returns of the quantities of lead ore raised, and lead smelted, in the United Kingdom, for 1845 and 1846, we give the same entire in another column; and from the difficulties which we have always found, and continually complained of, in our attempts to obtain anything like continuous and correct returns of sales of lead ores, we consider this a document of considerable importance.

The following, it will be found, are the total quantities for the two years above mentioned:—

		LEAD ORE.		LEAD.	
		1845.	1846.	1845.	1846.
England	*Tons*	54853	52997¾	37413	35721
Wales		16412	14978¼	11014¼	10027¼
Scotland		1173	1161	901	942
Ireland		1944	1641	855¼	811
Isle of Man		2259	2316	1523	1663
Total	*Tons*	76641	73094	51707	49164¼

From which it will be seen, that the decrease in 1846, as compared with 1845, was—of ore, 3494 tons; and of lead, 2522 tons: such decrease being pretty equally distributed over the five divisions of the kingdom—while the exportations, during the same two years, had decreased from 169 tons of ore to 53¼ tons; and from 10,485 tons of lead in 1845, to 6421¾ tons in 1846. We have not sufficient data on which an opinion can be expressed, as to the real causes of this depression in the lead trade, or rather in the quantities of ore raised; but, from a review of the returns in question, we find that all the large mines in the kingdom, with very few exceptions, have participated in the decrease. Thus, East Wheal Rose fell from 7883 tons of ore in 1845, to 5191 tons in 1846; Alston Moor Mines, from 6837 tons to 6418 tons; Tamar, from 1454 tons to 1182 tons; Wheal Betsey, from 296 tons to 58¼ tons; Goginan, 1768 tons to 1558 tons; Tarlargoch, from 1955 tons to 1308 tons; the Mold Mines, 1078 tons to 296 tons; Milwr, 330 tons to 139 tons; Pen-y-bryn, 156 tons to 31 tons; Dingle, 790 tons to 517 tons; sundry small mines in Derbyshire, from 857¼ tons to 757¼ tons; and many others, which, from returning a few score tons in 1845, in 1846 were blank. Some few will be found to have increased; but, upon the entire amount, the absolute decrease will be found to be nearly equal to 5 per cent.—while the exportations of lead had decreased 40 per cent.

The value of such returns, in all branches of commerce, is inestimable, as showing the relative position between demand and supply—the variations in quantity and price between one period and another—and thus directing the producer, the merchant, and the consumer, in their several avocations, how to take advantage of the various fluctuations which are constantly occurring, and in connection with passing public events, in most instances to assign the cause. This is the first opportunity we have had of publishing so elaborate and correct a table of returns connected with the lead trade; and while we return our sincere thanks to Mr. Hunt for the supply, we trust he will be enabled to forward us returns still more ample on future occasions. With his usual anxiety for the diffusion of correct knowledge, connected with mining operations generally, and particularly of the United Kingdom, we are happy to find that he is now delivering a course of six lectures at the Royal Institution, Manchester, and the same number at the Collegiate Institution, Liverpool, on mining and metallurgy; and, from the syllabus now before us, we feel convinced they will be highly calculated to stimulate a desire for the requirement of these most interesting of sciences.

There could no task much easier, than to lay together a series of observations, positive in their tone, and plausible in their character, as to the most feasible methods of removing, or ameliorating, the present pressure; but, for ourselves, we prefer to give the truth time to reach the surface from her Artesian depths, and not to say, in respect of her, "lo here" or "lo there;" when persons intimately acquainted with the whole case, and familiar with its characteristic particulars are themselves in doubt, and widely differ in opinion, as to the true remedy suggested by our present circumstances. We cannot, in fact, "rush in where angels fear to tread;" but we may take leave to submit, to the judgment of our readers, a word or two as to the particular heads of treatment, which are most confidently propounded as a remedy. Some are of opinion, that time alone can supply the true cure; and that, with a little more patience, the evil will work itself out. A second class is of opinion, that the suspension of railway, and other branches of public industry, will afford considerable relief; and a third class considers, that the temporary suspension of the Bank Bill of 1844, and the enlargement of the circulation, by an issue of Bank notes, will bring health and vigour back to our commercial circles. We must say that, for several reasons, we have a good opinion of the remedial efficiency of two, out of three, of these expedients. Bank notes, if not money itself, is its accurate representative throughout all the trading operations of the kingdom; and it is probable, that an infusion of this secondary and substitutional money, into the circulating stream of our commerce, would bring the river up to its natural height, until the dews and rain of heaven, coming down upon our industry, shall have brought back that truer and more precious species of circulation, by which the stream of our commercial activity would be permanently replenished and sustained. Five millions, for instance, thus granted to the public necessities would be a means of winning five other millions, and the vessel of the State probably be carried by its floating power past the sands and shallows which now impede its course, and, gaining the open sea, fill her sails, and press prosperously forward as heretofore, in pursuit of the glorious ends of empire. To speak without a figure, would not the issue of Bank of England notes, to the amount of five millions sterling, be equivalent to the temporary creation of capital to that amount, which, easing the prevailing pressure, would circulate, until by the industry and productive power of the nation, we had won back the precious metals. Until Consols had run up again to 90, and the foreign exchanges generally ruled in our favour, when it would be quite in our power to dispense with, and to cancel, the extraordinary issue.

As to another of the restoratives proposed—namely, the suspension of railway undertakings, and some other branches of domestic industry—we think that, if suspended to such an extent, as will at all relieve the money pressure, in the great mercantile emporiums of the kingdom, that then it would tend to aggravate the existing evils as a whole, rather than to lessen them. We think there is no denying that, by this species of expenditure, and by the occupation it has afforded, not only to that large class of labourers immediately occupied in railway works, but also to those occupied in the coal and iron districts, and also to those engaged in supplying the plant and furniture of railways—a large proportion of our population has been kept in a state of competency and contentment, and the public revenue very materially assisted. By stopping, to any sensible extent, these fruitful efforts, we shall choke up the sources of income, both to people and Government, and make ourselves chargeable with the folly of that man, who killed the bird that had been laying him the golden eggs.

A third palliative, very favourably spoken of, is time and patience; and no reasonable person will, we think, doubt the pectoral efficiency of these elements. It is not a Government, nor a Parliament of angels, that can rectify the disorders, or remove the difficulties of the crisis, *per saltem*—nothing of the kind; we shall have to wait, and to work for it; and the most we can accomplish, laying ourselves out in both these postures, will be, in some measure, to hasten and facilitate their departure. As one restorative ingredient in our refilling cup (for which we have just returned public thanks), we have won, from the fruitful womb of these islands, food to the amount of fully ten millions sterling, beyond our winnings by the harvest of 1846. It will, we think, be possible to make of this great public donative a fulcrum upon which we may found, in a little time, such a force of leverage and machinery, as shall be efficient to the lifting of all the great interests of the State into a course of visible improvement and prosperity. We submit these few remarks, and the consequences deducible from them, to the practical understanding of our readers. We think they will be of opinion, first, that to check the domestic industry of the kingdom in any of its large branches is, at least, an equivocal, and may be a dangerous, remedy. Second, that an issue of Bank of England notes for a time only, and to an amount adequate to the easing of the present pressure for money, has no disadvantage which can weigh against the benefits and relief it is calculated to bestow. And, thirdly, that no permanent improvement can be expected, unless every man in his place, and to the extent of his ability, is found assisting, by his active efforts, in the creation of that wealth of which a recent calamity, whose dark shadow is still tipping our horizon, has been the chief means of depriving us.

As very great interest exists, at the present moment, in every circumstance connected with the smelting of copper, as so many different processes have lately been brought before the public and patented, and, more particularly, as the proposed plan for smelting by electricity excites so much inquiry, we are anxious to describe, as accurately to our readers as possible, every new process which comes under our notice. With this view, we have given at length the specification of a recent patent for this purpose, taken out by Mr. De Sussex—the principal being the easy conversion of the sulphurets of copper, and other metals, into oxides, and for so completely discharging the entire sulphur contained in the ore, as to produce a pure metal. There have been various patents for producing oxides from the sulphurets—how far this is superior, we leave to our metallurgical readers, whose attention we call to the subject.

We, last week, adverted to the working of mines in Ireland, by the application of capital, on the part of Government, as a course which would be far better calculated to advance the interests of that country than any other measure hitherto put forward; and it is with sincere pleasure we find, from communications received, that the subject has excited attention on the part of individuals who, possessing capital, and willing to embark in mining enterprise in the Sister Isle, only require that Government should step forward and afford assistance, as well as security for its application—which, unfortunately, Ireland does not present, without some active and determined measures being adopted. It was not from mere report, or the observations of others, that we advanced the opinions promulgated in our last Number, but from personal investigation and inquiry—having traversed the Sister Isle from east to west, from north to south. It is proverbial in all countries, that the mineral districts are those most barren: it is there that famine exists, where no means of employment is given. The surface, arid and sterile, the peasantry perish—while even the source of wealth is beneath their feet. Then is it that we should stir ourselves, and at once direct attention to the source from whence riches are acquired, adding to the national wealth, and affording the means of employment.

When writing the article which appeared in the Journal of last week, we were unconscious (being then in Ireland) that it was proposed to raise a subscription for the destitute in that country, on the occasion of offering thanksgivings for the productive harvest; while it affords us the opportunity, on the present occasion, of expressing the satisfaction we feel in finding that we are not singular in directing attention to Ireland, and the distress that there prevails. True it is, that millions have been bestowed in giving food and employment to those who were famishing. True it is, that, even with the aid thus afforded, thousands died of want. True it is, that millions were placed in the hands of the heartless landlords, who would repudiate the claims which the country has upon them. And last—not least—which will ever be a source of delightful reflection on the part of England, is the private subscription of nearly a million sterling, in supporting the destitute in Ireland, during the past 12 or 18 months. What, we would ask, is the position of that country at this moment?—one of desolation in prospective; for, with a limited and unequal crop, with want of labour—capital circumscribed as regards railway and other undertakings—there would appear, in certain districts, no chance whatever whereby death, arising from want, can or is to be avoided, without it be by Government aid or private contribution. It may be asked, are there not landlords?—is there not property in the country? And again, how is it that corn, oats, cattle, pigs, eggs, and, indeed, aught that can be raised or nourished in Ireland, is exported, when it is so much required at home? These questions meet with a ready reply. There are landlords; but they are absentees. There is property in the country; but it is spent abroad. The corn, the cattle, indeed every thing which will find a market, passes away from Ireland, and the proceeds are realised by the merchant, the shipper, the agent, the landlord, the middleman, and, lastly, the tenant. But we are running away from the point we have more immediately in view: that of employing capital in the working of the mines in Ireland, whereby employment may be afforded, and benefits derived by the Government, or the capitalist, at the same time securing to the landlord an income which should at once induce him to act with liberality, even were it to secure him his rental, and, at the same time, that kindly feeling which the tenant should ever manifest towards the landlord, where industry is displayed on the one part, and liberality evinced on the other.

Let us, then, revert to mining enterprise. We again repeat, that we court the assistance of those who, interested in mining pursuits, possess the means of rendering information, while it will be our province to afford the evidence we possess of the advantages arising to Ireland from the development of its mineral resources. On looking back, for the last four years, as to the mineral produce in copper alone, exclusive of lead and silver-lead, as well as sulphur ores, we find that the quantity raised is 70,950 tons, amounting to 455,000*l.*; if we deduct from this gross amount 12*s.* 6*d.* per ton freight, with land and other charges, we should find that, from 10 mines alone, 102,500*l.* has been rendered annually in mineral produce for profit. And on reviewing the accounts of the Mining Company of Ireland, we find that the profits, for the three years ending 1843, amounted to 24,000*l.*; while those of the three past years are no less than 52,000*l.*, or more than double.

Now, allowing the ordinary rate of labour, with the charges for machinery, agency, &c., and admitting 10 per cent. profit on the working, we should at once afford employment to a vast number of individuals, who, with their families, might thus be enabled to provide all the comforts which remunerative employment can give. Such is the present—and, if we are to judge by this, we can well imagine the benefits calculated to arise from the application of capital to mineral districts, heretofore unproved, but where lodes are known to exist. Again, then we say, let the Government apply 500,000*l.* to opening the mines of Ireland—a tithe may accomplish the object, but we would not be meagre in our givings. The money would be expended in employment; the results, if any—and who can doubt the beneficial advantages attendant upon the outlay?—would amply repay the advances. A demand for labour would be the result; and happiness, with comfort, we feel assured, attend the application of capital to an object so legitimate, and which would tend to advance our national wealth, and relieve those who now cry for help. We trust the Government, and those possessing power, will not lose sight of this important question, but institute inquiry, if they are not already convinced.

It is more than probable that the loan, which the British Copper Company was recently able to negotiate with the Bank of England, will be advantageous both to grantor and grantee—the great corporation in Threadneedle-street has, of course, well looked after itself; not that we mean, in the least degree, to insinuate, that they have in any sense more than done so. In several cases which have, within a little time, come before the public, the liberal conduct of that great establishment has been the theme of much, and deserved, commendation; but, of course, in this instance, they have made the advance in a manner in which we should desire the transfer of all merchandise to be made—on good security, and at a good profit; and, further, they have paid themselves the 1,200,000*l.* with which they had previously accommodated the company. The receivers of the loan have cancelled their old debt, and contracted a new one, which will give them such an amount of floating capital in hand as will put it in their power to prosecute with more vigour, and, consequently, with more success, the great copper mining interest, of which they are both directors and trustees. The failures of some very large shareholders, and their inability to pay up their calls, is understood to be the immediate cause of the company's application to the Bank for assistance—and the very ready concession of it proves the confidence the Bank entertained as to the perfect solvency, and the resources of the company. It has been said, that a motive beyond the interests of the parties directly concerned swayed the mind of the Bank, when it came to deal with this application. It was alleged, it is said, that, if any sudden check, any serious stand-still, fell on the affairs of this company, some 5000 or 6000 miners would thereby be thrown out of employment, and a new element of discontent and possible violence created; and the Government, who were consulted in the premises, thereupon advised the concession of the loan. For ourselves, we doubt if there is one word of truth in the statement. We believe it to have been a fair merchant's transaction, standing on its own merits, and apart from all collateral aspects. But the mere statement furnishes us with an occasion for saying, that we confidently hope no such results are to be feared from the miners; if we have rightly taken the gauge of their temper and disposition, we are satisfied they are not. However, let us add, that we are now about to enter upon a winter, the vicissitudes and hardships of which may press heavily on the labouring population, on the mining industry, of this whole kingdom. We trust the miners of the West of England, at least, will show that they know how to suffer hardship, and how to set an example of obedience. Tumult and insubordination will aggravate all the evils which, in the order of Providence, they may be called on to bear. We counsel them to maintain external peace, as the emblem of that inward peace, of which thousands of them know the value, and the fruits of peace will be theirs—that is, quietness, and assured prosperity for the future.

Improvements in Casting Cylindrical Pipes.—Mr. D. Y. Stewart, of Montrose, has taken out a patent for a new mode of casting iron water or gas pipes, or other cylindrical tubes; by which a far more superior material is produced, at a much less cost than by the usual method. The mould consists of a perpendicular cylindrical iron box, of the required size, with a shaft in the centre, longer than the mould, and communicating with machinery above, by which it is kept revolving, and, as it revolves, it gradually rises. At the bottom of this shaft is an instrument, which may be termed a "presser," or "rammer," consisting of an iron block, having inclined tabular faces, of such smaller diameter than the box, as to leave the sand of the required thickness for the mould. On feeding the sand at the top of the box, it is distributed towards the sides, and the shaft and rammer, gradually revolving and rising, press it with great force against the sides of the box, leaving the mould finished and perfectly cylindrical on its arriving at the top, ready for the insertion of the core. The amount of pressure against the sand is regulated by means of a counterpoise weight. The following are the advantages claimed by the patentee:—"1. A perfectly straight cylindrical pipe, of uniform thickness.—2. No parting or joint of any kind.—3. Dressed at one-half the ordinary cost.—4. Less sand used than in any other way, and, of course, easier dried, if required.—5. The castings and sand easier removed from the boxes than in the ordinary way.—6. The flasks, or boxes, better calculated to resist the pressure of the metal than any now in use.—7. This method is the best for casting pipes perpendicularly that has hitherto been employed.—8. The greatest recommendation of all is, the simplicity of the apparatus, which requires the attendance of a boy only, who with my machine, as at present working, turns out easily six pipes, six inches bore, per hour." We understand, that two miles of water-pipes have been laid by the patentee at Montrose, and the Town-Council passed him a vote of thanks. Some capitalists have joined the patentee, forming a company, and ground has been secured in Glasgow, where premises will be erected for carrying on the business on a large scale.

Messrs. Mullins and Co. have purchased 8 tons of lead from the Ecton Company, which will be brought to London by the North-Western Railway, which we believe, is the first parcel of ore brought here by such a transit.

THE LEAD TRADE.

PRODUCE OF LEAD ORE AND LEAD IN THE UNITED KINGDOM, FOR THE YEARS 1845 AND 1846.

From Returns made to the Mining Record Office, Museum of Practical Geology.

By ROBERT HUNT, Esq., Keeper of Mining Records.

These returns have been obtained, in most cases, from the parties immediately connected with the various mines, and from the published ticketing papers. As there is no regular publication of the lead sales, and as the ores are sold in large and small parcels, sometimes publicly, but often by private contract, there has been much difficulty in obtaining accurate information of the entire produce of the United Kingdom. We have more particularly to acknowledge the very important assistance of Mr. John Taylor, jun., from whose knowledge of the subject the following returns acquire a value for correctness, and a close approximation to the absolute quantities of lead ore raised, and lead smelted, which they would not otherwise possess. We are also highly indebted for the promptitude with which returns and information have been furnished by Messrs. Walker, Mr. Sopwith, Mr. James Barker, of Bakewell, Mr. Percival Johnson, Mr. Davy, of Redruth, Messrs. Williams, of Scorrier, and Mr. Pattinson. It being desirable that correct accounts of all the mines of lead and silver should be regularly published, it is hoped that the several parties who are connected with lead mines and smelting-works, will furnish to the Mining Record Office the returns for the present year as early in 1848 as possible. It would appear, from the inquiries which have been made, that the produce of merchantable lead from the ore throughout the kingdom averages about 68 per cent., and that from 7 to 8 ozs. of silver is the average quantity at present procured from the ton of lead. In many instances the quantity of lead ore raised has alone been furnished us, in others only the amount of lead smelted; in both cases we have computed, with as much care as possible, the lead and the lead ore.

TABLE,

Showing the Total Quantity of Lead Ore Raised and Lead Smelted in the United Kingdom:

		Lead Ore. 1845.	Lead Ore. 1846.	Lead. 1845.	Lead. 1846.
England	Tons	54853	52997½	37413	35721
Wales		16412	14978¼	11014¼	10027½
Scotland		1173	1161	901	942
Ireland		1944	1641	855¼	811
Isle of Man		2259	2316	1523	1663
Total	Tons	76641	73094	51707	49164½

PRODUCE OF LEAD ORE AND LEAD IN THE UNITED KINGDOM, FOR THE YEARS 1845 AND 1846.

	ENGLAND. County.	Mines.		Lead Ore Returns. 1845.	1846.	Lead Returns. 1845.	1846.
Cornwall		Callington	Tons	950	1138	570	683
		Huel Mary Ann		—	166	—	100
		Cornubian		420	—	252	—
		East and West Haven		16	—	9	—
		Huel Trelawney		280	529	168	316
		Camelford		180	—	108	—
		East Huel Rose		7883	5191	4729	3114
		Cargol		55	306	33	183
		Oxnams		—	188	—	113
		Huel Rose		57	378	34	224
		Huel Penrose		116	11	69	7
		Holmbush		—	12	—	7
		New Quay		73	—	43	—
		Porthleven		80	82	48	49
		Pentire		—	34	—	20
		Cubert		—	136	—	81
		Leman		—	30	—	18
		Huel Concord		—	30	—	18
Devonshire		Tamar		1454	1182	944	768
		Huel Betsey		296	58½	148	29
		Huel Adams		59	33	29	16
		East Tamar Consols		—	114	—	74
		Combmartin		174	213	104	127
Cumberland		Alston Moor Mines		6837	6418	4615	4330
		Roughtingill		175	—	87	—
		Driggith Beck Waste		21	3½	10	2
		Dry Gill Mine		—	12½	—	6
		Driggeth Mine		74	36	37	19
		Cumberland		25	—	12	—
		Greensides		1430	1560	1100	1200
Durham and Northumberland		Mr. Beaumont's Mines		12200	12000	8130	8000
		Teesdale Mines		2572	2850	1688	1870
		Weardale ditto		560	560	372	372
		Sharnberry (Durham)		88	64	58	42
Westmoreland		Dreftom		480	480	320	320
		Hilton					
Derbyshire		Sundry mines		8571	7571	6000	5300
Shropshire		Snailbeach		3000	3852	2100	2700
		Grits and Gravel		300	298	220	219
		Bog Mine		220	230	160	158
		Pennerly		31	100	23	68
		Round Hill		—	11	—	8
Somersetshire		Mendip Hills		—	4	—	3
Yorkshire		Swale Dale		4237	4237	3275	3275
		Arkendale					
		Grassington		1358	1313	816	788
		Cononley		631	663	414	436
		Pately District		930	886	608	668
		Buckden		—	—	—	—
		Total	Tons	54853	52997½	37413	35721
	WALES.						
Cardiganshire		Lisburne Mines	Tons	2492	2650	1623	1722
		Llancynfelyn		—	4	—	2½
		Bwich-yr-esgair		30	—	20	—
		Caenant		10	—	6½	—
		Bryngias		10	—	6½	—
		Cwm-ystwyth		356	588	238	382
		Pen-y-banc		24	—	15	—
		Llewyrnog		48	—	30	—
		Esgair-hir		41	110	26	71
		Cwm-sebon		197	250	128	166
		Penrhiw		46	—	27	—
		Llanfair		188	242	103	157
		Goginan		1768	1568	1149	1018
		Gogerddan Mines		210	118½	136	77
		Pen-y-cefn		36	46	23	29
		Tal-y-bont		25	—	16	—
		Nant-y-creiau		120	57½	72	33
		Cefn-cwm-brwyno		72	75	43	45
		Llwyn-maiya		60	—	39	—
		Bwich-cwm-erfin		25	20	15	13
Carnarvonshire		Llanrwst		—	113	—	67
Carmarthenshire		Nant-y-mwyn		622	659	404	427
		Llanfurnach		15	—	9½	—
Denbighshire		Llangollen		—	26	—	17
Flintshire		Tarlargoch		1955	1308	1319	882
		Fron-fowneg		125	33	67	23
		Hendre		594	918	416	642
		Longley		230	55	161	38
		Maes-y-safn		1069	1296	750	907
		Pen-yr-henbias		822	911	575	637
		Gayer		18	—	12	—
		Mold Mines		1078	296	726	198
		Long Rake		76	81	51	54
		Millwr		330	139	223	94
		Pen-y-bryn		156	31	109	22
		Dingle and Deep Level		790	517	553	361
		Pant-y-pwllgwr		—	18	—	12
		Parry's Mine		143	132½	99	92
		Trelogan		94	25	63	17
		Westminster Mines		967	819	676	573
		Wainlas		34	35	24	24
		Halkin Hall		135	118	92	81
		Pantyrbys		—	12	—	8
		Carreg-y-boeth		—	11	—	7½
		Afon-goch		—	62	—	40
		Bodle-wyddan		—	25	—	17
		Belgrave		—	305	—	213
		Brintall		45½	84½	31	59
		Tyddyn-gwydd		57	—	40	—
		Bryngwrlog		103	27	73	19
		Holywell		16	—	10	—
		Maes-lygan		37	—	24	—
		Jamaica		—	33	—	21
		Mines under 10 tons		147	168	54	109
Montgomeryshire		Llangynnog		115	103	74	66
		Dellfe		586	557	383	361
		Cae-Conroy		73	34	47	22
		Rhos-wydol		—	52½	—	34
		Dwngwm		25	—	16	—
		Gorn		33	43	21	28
		Pantmawr		48	—	29	—
		Nant Iago		—	20	—	13
		Craig-Rhiwarth		—	30	—	20
		Brin-dafi		130	150	96	110
Merionethshire		Portmadoc		20	—	13	—
		Total	Tons	16412½	14978½	11014½	10027½

THE LEAD TRADE—*Continued.*

	IRELAND. County.	Mines.		Lead Ore Returns. 1845.	1846.	Lead Returns. 1845.	1846.
Clare		Kilbricken	Tons	102	38	66	25
		Ballyhicky		119	32	83	22
Down		Newtonards		433	211	280	137
		Conlig		100	65	65	42
Limerick		Limerick		12	—	8¼	—
Monaghan		Bond and Newry		11	44	13	29
Wicklow		Glenmalure		867	314	270	250
		Sundry mines		93	240	56	144
		Lugamure		457	405	—	—
Waterford		Barristown		22	250	14	169
Wexford		Caime		218	42	—	—
		Total	Tons	1944	1641	855¼	811
	ISLE OF MAN.						
Isle of Man		Foxdale Mines, including Peel's Shipment & Beckwith's Vein		1902	2071	1285	1408
		Laxey		327	155	220	104
		Douglas		—	80	—	54
		Mona		30	10	20	7
		Total	Tons	2259	2316	1523	1663
	SCOTLAND.						
Ayrshire		Wood Head	Tons	309	480	424	400
Dumbartonshire		Dumbarton		269	—	161	—
Kirkcudbrightsh.		Cairnsmore		—	20	—	13
Lanarkshire		Lead Hills Mine		395	661	316	529
		Total	Tons	1173	1161	901	942

LEAD ORE AND LEAD IMPORTED AND EXPORTED.

Years.	IMPORTED. Lead Ore. Tons cwts.	Lead. Tons cwts.	EXPORTED. Lead Ore. Tons cwts.	Lead. Tons cwts.
1843	68 16	2775 0	176 9	14610 14
1844	95 9	3058 0	257 3	14697 0
1845	444 3	5209 17	169 1	10485 8
1846	724 1	7862 12	53 13	6421 15

THE MINING DISTRICTS AND MINES OF IRELAND.—No. II.

In our last Number we adverted briefly to the district of the county Wicklow, with some general observations on its geological features, and the mineral deposits in the Vale of Ovoca. In continuation of the remarks then made, we now purpose taking the most eastern ground, and observing on the locality, with some statistics, as pertain to the Connorree and Kilmacow Mines. These mines are situate to the east of the great mines of Ballymurtagh, Ballygahan, Cronebane, and Tigrony, which mines extend for a distance of, at least, 2000 fathoms on the course of the main sulphur lode, being worked, for nearly the whole length, to a considerable extent, and yielding large returns in the shape of sulphur ores; the copper found, except in isolated instances, where it is of high produce, not yielding more than from 3½ to 5 per cent. The mines, however, have been worked with profitable results, as the dividends, declared from time to time, at once establish; and the result of the workings of the mines under notice at once prove, that capital employed in Ireland, in the development of its mineral resources, will amply repay the adventurers. The present body of adventurers have, within the past two years, it appears, realised a sum of between 3500*l.* and 4000*l.*, without sinking one shilling of capital; although, we must confess, we consider they have not given the mine fair play, inasmuch that they have been robbing the hive without providing for the winter; this, however, is not a matter for us, and hence we proceed to offer some passing remarks on the mine. Throughout the whole length of ground, to which we have referred, rich bunches of copper have occasionally been found in side and oblique branches, attached to, or connected with, the great, or main, lode. The Connorree and Kilmacow Mines are situate east, immediately adjoining Tigrony on the west, with the underground workings, of which it forms a communication at a depth of 33 fms. These mines extend for a distance of a mile, or thereabouts, on the run of the lodes, which are within 20° of an east and west direction. Looking at the surface, it is only natural to assume that the lode and branches extend throughout the sett, although it is possible they may be shifted, or heaved, in their course proceeding east, as is found to be the case in the Vale of Ovoca, where the lode in the Ballymurtagh and Ballygahan Mines is found to be shifted by a slide, or heave, 150 to 200 fathoms to the south of Cronebane Mine, and which has affected the lode passing through Cronebane and Tigrony into the Connorree sett, there being several swells, or diversions, in the course of the lode. To proceed, however, to the workings of the mines under notice, we may observe, that from the western part of Connorree to the eastern workings of Kilmacow is about 300 fms.; while 180 fms. of this extent has been laid open from surface in the Connorree Mine, which has been extensively worked above the 64 fm. level, and prosecuted to a considerable extent down to the 84 fm. level, upwards of 14,000 tons of sulphur ores having been extracted within the past two years. The drawing shaft is sunk perpendicular to the 54 fm. level, and from thence is carried down to the 84, on the dip, or inclination, of the lode, which is at an angle of about 45°. The ores are raised by means of a steam whim, than which, except at the Eeton Mines, we do not remember seeing a piece of machinery more deserving of reprobation, as indeed is the surface material generally.

The works have, for the past two years, been confined to the raising of ores in sight, without regard to prospective results—and hence we may expect, without a change takes place in the working of the mine, that its operations must, ere long, be suspended. We were, however, given to understand, that it is proposed to extend a level east, at 30 fms. depth, into the Kilmacow Mine, which, however, would appear to us to be of little or no avail—inasmuch that a shaft has been sunk in that part of the mine 21 fms. in depth; and the level will require to be driven many tens of fathoms—30, at least, being through troubled or disordered ground. It appears that, during the past two years, about 14,000 tons of sulphur ores have been raised, producing about 11,100*l.*, in addition to which copper ore and precipitate, to the amount of 1120 tons, worth about 4500*l.*, have also been obtained, the ore being of low quality—making, together, an aggregate produce of 15,600*l.*; while the cost for the like period, we are given to understand, did not exceed 12,150*l.*—thus leaving a net profit of 3450*l.*; the sulphur ores alone, as it will be seen, having paid the expenses of working the mine. It is gratifying to be able thus to record the profitable results attendant the working of the mine—while the following little matters of statistical detail will, doubtless, possess some interest to those connected with mines in Ireland. The extent of ground driven in the period above mentioned is 310 fms.—the cost of which, with tutwork bargains, may be set down at about 1400*l.*; raising sulphur ores, 1850*l.*; copper ores, 650*l.*; and precipitate, 300*l.*; the cost for establishment, 550*l.*; that of smithy, carpenters, &c., 400*l.*; carriage of ores, 2900*l.*; and merchants' bills, 3000*l.*; which, with sundries (950*l.*), make a total of 12,000*l.* Looking, then, at the results attendant on working this mine, it affords sufficient evidence of the importance to be attached to the working of mines in Ireland. We hope, next week, to be in a position to continue our report on the Wicklow district, ere we proceed to other localities—information relating to which has already been kindly placed in our hands, in addition to that acquired from personal investigation.

EMERALD MINES OF NEW GRANADA.—A decree has passed the senate and representatives of this republic, by which it is declared, that the emerald mines, discovered within the territory, can only be worked on account of the nation, to be carried out either by the administration, or by leasing, as shall be determined on. Leases of newly-discovered mines to be for at least six years; and the lessees to be answerable for the next year, in case they should not be let during that period. All the buildings, machinery, &c., that have been employed on the said mines to remain, should the lessee give up possession, as the property of the Government. The minimum rent per annum for each lease to be 128,000 reals, or about 2666*l.* sterling. All emerald mines at present worked as private property to be still considered so; but to become forfeited to the dominion, if they cease to be worked for the period of one year. An invitation also appears under the same decree for the renting the emerald mines of Muso, in the canton of Chiquinquira, in the province of Velez—the lease of which expires on the 28th June, 1848. The period of this lease not to be for less than 40 years; the rental, 128,000 reals per annum. The Government stipulate that none of the mines in their possession shall be worked during the continuance of the lease; and the lessee to have the privilege of working all the mines in the district of Muso. Proper security is to be given; and the lease will contain clauses of forfeiture, in case of non-fulfilment of contract. The decision of the Government will be made known on the 20th of January next.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

We are now rapidly approaching, what may be called, "the season" of French mercantile enterprise; and already is the attention of capitalists beginning to be turned to mining matters, and to undertakings dependent thereon. Within the last few days, I have learned that a company has been formed for working the iron furnaces of Mondon, in the department of the Haute Vienne. The company has no fixed capital; but a certain number of persons have agreed to make the advances necessary, and to take any number of shares that may be required. The capital which will be needed must be rather considerable, for 28,000*l.* have had to be paid down for the establishment. The company will not, however, make any appeal to the public for funds. I learn, also, that the company, headed by, and bearing the name of, M. de Bassano, for working the mines, &c., of Bona, in Algiers, has increased its capital from 60,000*l.* to 240,000*l.*, divided into 20*l.* shares.

At the meeting of the shareholders of the latter company, at which the increase of capital was determined on, it was resolved, that the loan of 16,000*l.*, which had been raised by the managing director, on his own responsibility, should be sanctioned, and that it should be paid off by bonds of 40*l.*, of which 20*l.* should be liable to be exacted 1st August, 1848, and 20*l.* on 1st August, 1849, interest of 6 per cent. per annum being paid in the meantime; or the lenders might have the option of receiving payment in shares. The managers and founders of the company are, by the bye-laws, entitled to receive *gratuitously* a very great number of the newly-created shares, in addition to what they already possess; but they abandoned this right, reserving to themselves in its place *one-third* of all the clear annual profits, and one-third of all that may remain after the procured by the sale of the concession, &c., on the breaking up of the company. An allowance of this kind is, of course, a matter for the consideration of the shareholders themselves; and as they have resolved to grant it, they have, probably, very good reasons to believe it right; but people not connected with the company do say that, considering all things, and especially the distrust with which mining enterprises in Algeria are at present regarded, the directors would have done well to ask, and the shareholders to award, less than one-third of the annual profits, as the price of their concession. The object of the company is formally declared in the bye-laws to be:—"The working of the mines of iron of La Meboridjah, near Bona, in Algeria; the establishment and workings in Algeria, or wherever else may be considered necessary, of furnaces and iron-works for the treatment of the produce of the said mines; the sale of the metallurgic products of the aforesaid mines and establishments; and the agricultural, rural, commercial, and industrial *exploitation* of all the lands, properties, &c., at present possessed, or which may hereafter be obtained, by the company." Out of the annual profits, one-fourth is to be regularly set aside as a reserve fund; and, when this fund shall amount to 20,000*l.*, it is to be employed to pay off first the 3000 primitive shares, and next the 9000 new shares created by the increase of capital, such shares being chosen by lot.

Pursuant to public notice, the Minister of Public Works attended at his office on Saturday, to receive offers for the supply of 60,000 rails, and a large quantity of chairs, for the Versailles and Chartres Railway. All the propositions that were made for the rails, were at higher prices than the Minister thought fit to give. He, consequently, ordered that new offers should be made on the 28th of this month; and, not to press too severely on the ironmasters (these famous men, who brag of being able to fulfil all orders sent to them), he directed that the 60,000 rails should be divided into eight lots, of 7500 each, instead of four, as originally provided. He also modified the conditions, by directing that, though each rail ought to be 5 metres in length, yet that 1 in 20 should be allowed to be only 3 metres 84 centimetres, provided that these shorter rails should have been originally made of 5 metres length, but cut down from some default in the iron. The Government really shows scandalous favour to these ironmasters. It would not have accorded an equal favour to any other of its contractors, though none of them have an iniquitous monopoly to protect them. And, be it remarked, the very men who obtain this favour, and yet who try to extort a higher price for the rails than the Government, with all its partiality to them, can dare to grant, are at the head of the principal iron establishments of the kingdom, and were called on to send in offers for the supply of the rails, as a particular mark of favour. With respect to the chairs, the Government succeeded in getting contracts accepted—I say succeeded; for such is the effect of the odious iron monopoly, that the Government has to look up to the ironmasters to get its contracts accepted, instead of the ironmasters looking up to it for the favour of an order. Messieurs Mertian and Co., of Montataine, took the contracts for two lots, at 208 fr. 40 c., and 215 fr. 70 c., the ton (about 8*l.* 6s. to 8*l.* 12s.) Another lot was taken by M. Drumaux-Gondarme, at 224 fr. 90 c. (9*l.*); and another by M. de Menission, at 222 fr. 35 c. (about 8*l.* 17s.) It will be observed, that there are considerable differences between these prices—in one case as much as 14s. a ton. I cannot give any explanation of this difference, nor, I believe, can anybody else. It would be absurd to suppose that it can arise from the necessity of sending the articles a considerable distance; for the expense thereby occasioned ought, in justice, to fall on the contractor. We must assume, then, that it is another consequence of the delightful monopoly which enables the ironmasters to fix any prices their whim may suggest. Perhaps we ought to feel surprised that, with the liberty before them, there should have been a difference of *only* 14s. a ton.

The Post-office advertises that, on the 12th of November next, it will receive offers for the supply of 38,200,000 kilogrammes (38,200 tons) of coal, for its mail steamers. Conditions of the contracts to be entered into, and periods fixed for the delivery of the coal, may be learned by your readers on application at the offices of the French Consul-General, at London. I should think that some English coalowner might, by a little exertion and tact, obtain this contract, and make a very good thing of it. Their coal is, certainly, preferable for steamers to that of any part of France, or Belgium; and there can be no doubt, I believe, that they *could* afford to sell it cheaper. The competition will, however, be keen; for the Post-office is to publish its notice at Paris, at Brussels, at the Prefecture of the Loire, at Rivè de Gier, at St. Etienne, at Marseilles, and at Calais, as well as at London.

The following paragraph, extracted from the last number of a journal of the Haute Marne, the great iron-producing district of this country, has been forwarded to me by a friend—I content myself with translating it literally:—"The ironmasters now know the miscalculations of the adjudications of 1846. The desire of purchasing masses of coal blinded them; they forced prices, and the cubic metre, which they believed they bought at 16 fr., costs them, on an average, 24 fr. At that time the *fonte blanche* was sold at 190 fr. and 200 fr.; at present, notwithstanding a sale of some importance has just been made at 170 fr., the price, in truth, is only 160 fr., in consequence of the offers of the sellers, who have not yet found the means of placing. The cost price of the *fontes* was 185 fr. Thus the establishments—having a stock which will last them to December, 1848—have only an enormous loss in prospective: they have no hope that the selling price will raise itself to the level of the cost price."

The Great Coal Company of Anzin is, like its colleague of the Loire, threatened with local opposition, though, fortunately, not of so violent a description. It has obtained from the Government an approval of the new tariff of the *octroi* on coal, together with a total abolition of all *octroi* duties in that part of the district of Valenciennes, in which its pits are situated. This measure excited great opposition, not only in the Municipal Council, but among the inhabitants; and the Government was pestered with petitions against them. Having disregarded them, it is now denounced, for having shown unwarrantable favours to the Anzin Company; and the company is bitterly reproached for having accepted them.

The St. Etienne newspapers are now trying to injure the Compagnie Generale of the Loire, by attacking its financial position. The *Union* says that the 65,000 parts, or shares, of the company have been quoted, till now, at 500 fr.—which makes only a dividend of 7 per cent. At 500 fr. the share, the real value of the mines of the company, says the *Union*, may be estimated at 32,500,000 fr. But the company is indebted to the amount of 18,965,000 fr.; and as, says the *Union*, the shareholders are, from the form in which the company is constituted, individually responsible for that amount, it asks, what will become of them, if the company should be compelled, by the Government or the Chambers, to dissolve itself? And it also asks, what will become of them, in case any of the great disasters to which coal pits are liable, from fire or inundations, should befall the company? But, though I thus notice what is said by the St. Etienne journals, I beg of such of your readers as may, directly or indirectly, possess a pecuniary interest in the company, not to attach any more importance to them than they really merit. Notwithstanding all its debts, all the hos-

tility which it has to encounter, and all the depreciation which its shares have undergone, the Company of the Loire, with the immense monopoly which it possesses, MUST, *if well managed*, be very profitable to the shareholders. But, nevertheless, some sweeping reforms (and among them, perhaps, a wholesale reduction of its immense staff of well-paid officers) are imperatively required at the earliest possible period.

The establishment of the Creuzot is making the newspapers puff off the steamers it has constructed for the navigation of the Rhone. One of these vessels was 90 metres long, and 7 wide, with an engine of 260-horse power, and it was, modestly says the newspaper puff, the largest steamer ever built for a river, either in England or France. In consequence of the success which this boat attained, five new steamers have, it is said, been ordered of the Creuzot establishment, three of 300 and 320-horse power, and of 500 tons burden; and two of 150-horse power, for towing vessels. But the best part of the puff is to come. It takes special credit for the boilers constructed by the Creuzot establishment, all of which, it says, are exactly on the same model as that of the ill-fated *Comte d'Eu*, which blew up a short time ago, and killed and maimed between 20 and 30 unfortunate creatures.

A meeting of the shareholders of the Grande Montagne is called for the 27th in this city, "to hear read (says the advertisement) the report of the directors on the progress and situation of the establishments of the company; all the shareholders, whatever be their interest, will be admitted, provided they be able to produce their shares." This last provision is a very excellent one, and ought to be adopted by all companies in this country. At present most companies, and especially those of mines, iron-works, or similar enterprises, do not allow holders of fewer than 10, 15, 20, and, in some cases, 40 shares, to vote, or even be present, at any of the meetings. This way of acting renders the control of the shareholders perfectly illusory, for the directors can always continue to pack a meeting, when it suits their purpose so to do.

The Vieille Montagne Company is now engaged in exchanging the old shares for five *coupures* each share—in other words, transforming each share into five. This measure is, I hear, highly approved of by the shareholders, as it facilitates the transfer of shares.—*Paris, Wednesday.*

BELGIUM.—The St. Leonard Company, at Liege, still carries on the establishment it erected in 1841, at Aix-la-Chapelle, in Prussia, for the construction of locomotives, machines, and railway waggons. It appears that the infant establishment outstrips the parent one in some respects, for the latter has just had to apply to the Government to allow it to import, free of duty, some machines constructed by the former—a privilege which was granted by Royal ordinance of the 12th.

The Government has just drawn up a new scale for estimating the value of imports and exports, which will enable the *real value* of them to be more nearly ascertained than is done at present. We shall thus have correct returns of, among a multitude of other things, the actual exports and imports of metallurgic productions.

Investigations are being made at Borg, and other parts of Prussia, for the discovery of ores. Prussia is at present entering boldly into the mining career; but for that she is principally indebted to our Belgian capitalists, and, though in a much smaller degree, to those of England.

Nothing has occurred in connection with our mines, or metallurgic branches of industry, of a nature to call for observation. They are, one and all, displaying their usual activity.—*Brussels, Tuesday.*

Original Correspondence.

MINING IN GREAT ORMSHEAD, LLANDIDNO, CARNARVONSHIRE.

SIR,—This mineral mountain is nearly two miles from north to south, and about one mile and a half from east to west. This mountain, from all appearance, was, at some distant period, an island, but is now a peninsula, composed of limestone, connected (below the sea) with the great channel of limestone to the west of Abergelle and Denbigh, and is the northernmost point of it out of water. Time, it would appear, with the sea rolling around it, has thrown in, from the Llandidno Bay on the one side, and the great opening from Penmanmawr into the Conway River, on the other side, a quantity of sand, filling the opening for two miles or more, once existing between this island and the mainland, above high-water mark—therefore, separating the seas a full mile, and connecting it with the mainland; and, being now thinly covered with decomposition and alluvial soil, is become tolerably good land—principally the property of the Mostyn family. This mountain—more perfectly stratified than most limestone—has each stratum, all around it, dipping towards the centre. The east side strata dipping west, the west dipping east, the north side south, and the south side north—all falling towards the centre, at an angle of 1 in 4, or 1 in 5; doubtless, the centre was once a crater, not very commonly found in limestone, but, from its contiguity with the primitive clay-slate, lying directly under, and at no great depth from, it, may be readily accounted for. This mountain has two mineral channels of ground running through it from north to south, varying in width from 30 to 40 fms., composed of grit, carbonate of lime, &c., containing a great number of parallel veins and strings, nearly vertical; also cross and oblique veins, underlying at different angles; and a great number of beds, horizontal from east to west, dipping towards the centre about 1 in 5. The mineral capabilities of this mountain have been only partially developed, and, for mining, may be considered a great deal in their infancy. The eastern channel, where anything like an effectual trial has been made, extends from north to south in the old Llandidno, and the new mine so called, about 150 fms. in length, and is partially worked about 100 fms. deep. It should be observed, that a great part of this work was done many centuries gone by—as will appear from many of the old tools being found, such as hammers, sledges, &c., made from ironstone pebbles, wrapped round with hazel-rods, such as blacksmiths now use for holding cutting tools: those rods served as the hilt or handle. The workings, before described, have yielded great quantities of rich copper ore, from a moderate calculation worth from 200,000*l.* to 250,000*l.*—leaving to the adventurers, as may be fairly assumed, a fair profit on capital invested. There is one vein which I should name, forming a junction with the before-mentioned great channel at an angle of from 50° to 60°; on the junction of this, and such oblique veins, with the vertical veins and beds, the very rich bunches of copper ore have been found, and are still in course of being worked, and making good returns. I should have said that the mountain is about 100 fms. above the sea, and that a level has been driven into it, which is 70 or 80 fathoms deep; and the deep workings drained by a small steam-engine pumping an 8-inch pump into it. The driving this level was a spirited undertaking—commenced and completed by Mr. Lloyd, proprietor of the new mine, and Mr. Worthington, of the old mine, at a cost said to be 4000*l.*, and was eight years in driving.

Tygwin: the workings of this mine have been on an oblique channel of ground, running from 40° to 50°, west of north, forming a junction with the great channel of ground, before described, in the centre of the mountain, but unlike it, being mixed with carboniferous limestone, a great deal mixed with calcareous grit, lying in beds, varying in width from 15 to 40 fms., and in thickness from 10 to 20 ft., dipping to the north-west about 1 in 4, or 15° from horizontal. Between these beds the rich deposit of copper ore has been found, and worked 175 fms. on the incline going northward, and from 15 to 25 fms. wide from east to west, yielding from 90,000*l.* to 100,000*l.* worth of malachite, black and grey ores—some of them making a produce of 30 to 40 per cent. This bed is in soft ground, near the surface, with firm roof and bottom, but gets more compact and solid near the bottom of the workings, composed of yellow sulphuret of copper, producing from 10 to 20 per cent. In working this flat—always heavily watered—125 fms. on the incline, its cropping being near to the level of high water, an opening was found in the roof, which let in a great deal of salt water, but was with difficulty again shut out with a dam, and the flat worked 50 fms. further northward, when the former stream, with great addition, was again cut, falling into the workings in torrents, which, with the means then employed, it was impossible to keep under, although two good steam-engines, with proper pitwork, were kept to work for a considerable time, pumping 3000 gallons of water per minute; consequently, the hope of again working it from the mouth of the incline has been abandoned for ever. Subsequently, a new company, with some of the old adventurers, was formed; and a new engine-shaft is being sunk to intersect the flat 150 or 200 fms. to the northward of the present workings, and a day, or adit level, is in course of being driven to the shaft, to take the water from such steam-engines as may be found necessary for draining the before-mentioned flat, or such others, if any, as may be found over it. At the cropping, other smaller flats have been found, yielding good ore near the surface; and it may be reasonable to hope that other flat or flats may be found worth working over the ore before-named. It may, in this instance, be observed, that mining, like razor sharpening, requires more skill in finishing than in beginning. For, if the adventurers had let the mine go by the run when the water was first cut, they might have quitted it 20,000*l.* better in pocket, than after hard fighting and much anxiety. I heard the history of difficulties encountered, and the bold and reckless manner in which the adventurers had combatted their difficulties, with little emotion, knowing them to be such as all miners are subject to; but could not hear, without much feeling, that whilst the adventurers, after showing such spirit, perseverance, and enterprise, had quitted the mine with loss, and, at the same time, had paid one-sixth part of all their returns, amounting to 15,000*l.* or 16,000*l.*, in the shape of royalty, evidently showing a want of feeling, or good understanding, between lord and adventurer, whose interest is so nearly allied. Why should the lord's agent not be a miner, to look into his interest, as far as mining goes; examine the mine thoroughly with the books and account; and consult with the miner, for the general good of both? If my hints should be carried out, I believe that, under existing low prices, the produce would increase, and that the lord would soon find an improving royalty, and confidence be given to the adventurers, and, consequently, much greater capital employed, with less risk. I trust, any remarks I may have made, or may hereafter make, may not be considered offensive or intrusive—my object being wholly for the general good of mining. There is, in every mining district throughout the kingdom, a greater population of miners than employment can be found for; and, as we have little, if any, control over the prices of metals—the price being regulated by the demand and supply—my object is, to make the best use of the means, in some measure under our control, for the employment of labour, in a manner—such as mining—which can injure no one, and add to the general wealth of the country in a surprising degree, which is easily explained. Most primitive clay-slate countries, as well as the grit hills in many places throughout the kingdom, might afford employment for a certain class of paupers to get small wages—which is better than being left in idleness, to eat the bread got by the hard earnings of others—who, as miners, I feel, would rejoice to have such employment. It should be here observed, that the present royalty of Tygwin Mine is $\frac{1}{14}$th, instead of $\frac{1}{20}$th, as formerly paid. A TRAVELLER.

Oct. 18.

NEW STEAM GAUGE.

SIR,—A most important invention has been submitted to me for my approval, patented by a Mr. Smith, of Nottingham, and is intended to indicate the strength of steam in steam-engine boilers; it is particularly adapted for steam-boats, and can be placed in the cabin, on deck, or on any other part of the vessel, where it may be seen by every passenger on board. It may also be fixed in the office of every manufactory where a steam-engine is used, at a considerable distance from the boiler. I am so much pleased with it that I have put one up at one of my own collieries; it is some distance from the boiler, and in another house, and works most beautifully, showing the rise and fall of the steam in the most delicate manner. The indicator is like the face of a clock, with a pointer, making one revolution in measuring from 1 lb. to 100 lbs. upon the square inch of the pressure of steam; it is quite from under the control of the engineer, or any other person, so that its indications may be relied upon, and the construction is so simple that it is scarcely possible for it to get out of order. I might give a full explanation of the machine, but I think it best to leave that to the inventor himself. The numerous and appalling accidents which have occurred from the bursting of steam-boat boilers have induced me to give you these observations, which I think desirable to be laid before the public. I may state that I have no pecuniary interest in the scheme; but, being the first person to whom it has been shown, and the first to make use of it, I feel it a duty that I owe to the inventor, as well as the public, to make it as universally known as possible. The indicator is put up at Tapton Colliery, near Chesterfield, and may be seen any day, by any respectable person, by inquiring either for Mr. Hindmarsh or Mr. Langlands.—GEORGE STEPHENSON: *Tapton-house, Chesterfield, Oct.* 15.

DOUBLE-ACTION PUMP.

SIR,—In your Journal of the 25th Sept., a question is asked by Mr. W. Bradbury, whether any one had seen a pump acting up and down—the water flowing through one set of pipes? I confess I have never seen it worked; but I see no reason why it should not, as but one clack or valve is required. This should be large enough to admit a double quantity of water; care should be taken to have the water-way in the bucket as large as it would admit of, as a double quantity of water would be required to pass through in its ascent. This would be but one barrel, as the plunger-pole would work in what is commonly called the clack-door piece, and form but one set of pumps or pipes. In many cases, where a column of pumps is not large enough to keep the water out of a mine, one additional pump made in this way, to put in the place of the former, the clack-door piece will enable them to do so, and effect a large saving, where a large lift of pumps would be required: the thing is quite simple. N. ENNOR.

Nashford, Taunton, Somerset, Oct. 14.

DISINFECTANT.

SIR,—Favouritism is the bane of truth, and of every good, and its influence is exerted *per fas aut ne fas*—utterly reckless of consequences and right. Government Commissioners have taken under their especial patronage Sir William Burnett's chloride of zinc, as a *disinfectant*; all that I shall say of it, in this its *new* relation, is this—that its agency here is very equivocal, and at best can only act in virtue of its loosely-combined chlorine—no more. Should we add sulphuric acid, with a view to disengage the remainder, we shall liberate only hydro-chloric, or muriatic-acid gas, which is no disinfectant at all. On the other hand, when we add sulphuric acid to chloride of lime, we accomplish the liberation of the whole of the chlorine. And, now that CHOLERA advances *cito pede*, we would do well to act on sound principles; and I have no hesitation to say that, if we rely on Sir William Burnett's chloride of zinc, we shall lean on a broken reed, that will only accelerate our fall. Nascent CHLORINE, or, in other words, gaseous chlorine, is our *only* safeguard, when judiciously employed.—J. MURRAY: *Portland-place, Hull, Oct.* 21.

VAPOUR OF ETHER ENGINE.

SIR,—I observe that Newton has patented the application of the vapour of ether, as an auxiliary to, and in conjunction with, steam. This was brought forward some years ago in France; when I showed I had long before proposed the vapour of ether, *per se*, as the prime mover of an engine; and mentioned that an officer of the Royal Navy, much admired it, and pronounced it admirably adapted for the ship's pumps at sea, and in a storm.—J. MURRAY: *Portland-place, Hull, Oct.* 21.

SHOWER BATH.

SIR,—I fancy that Mr. Hazard's *patent* for *my principle* of a new shower bath will little avail him, as I noticed the other day in London a similar *manual* shower bath, in form and arrangement precisely like that of Hazard's patent, but in which the air orifice was opened and shut by a *lever valve*—so that my original plan has been again adopted. J. MURRAY.

Portland-place, Hull, Oct. 21.

THE LYMNOA.

SIR,—On the 30th ult., a friend in London informed me he had found, in the water of the fountain basins, in Trafalgar-square, what he believed to be a *marine* shell, with its inmate alive; and supposed that these had been discharged by the fountains, and brought from considerable depths. I find, however, that it is *not* a littoral, or marine, helix, as he supposes it to be, but the *lymnoa*, a *fresh-water* shell, abundant in pools, &c. It is by no means improbable that it should exist in a rudimental and dormant state at great depths, and be discharged by the fountains. Their growth and multiplication are rapid, as may be seen by transferring the lymnoa to a glass of water. They are abundant in the basins. J. MURRAY.

Portland-place, Hull, Oct. 21.

ADCOCK'S SPRAY PUMP.

SIR,—It strikes me as very surprising, that the discussion about Adcock's spray pump should excite so much personal feeling on the part of those interested in carrying out the invention. Mr. Adcock's patent pump appears to me to be one calculated entirely to revolutionize the old system of draining mines, and, as such, surely deserves a dispassionate examination in your Journal. Mr. Blewitt says—"If you wish to have a rational and temperate discussion upon the merits of Adcock's spray pump, I have no objection to assist in it." Can Mr. B. doubt this, being not only your wish, but the wish also of a large body of your scientific readers? I am at a loss to account for so much reserve being shown in this matter. It is usual, when misstatements are made, to correct them, by whomsoever made; but not so in this case. We have, on one side, condemnatory statements given and vouched for as facts, and, on the other, mere angry words, with, I might say, an obstinate withholding of facts. Why all this coyness in a matter of plain engineering? I certainly admire and appreciate Mr. B.'s kindness, in inviting the sceptical to visit his mines, and see the pump at work; but, with every inclination to go, I have not the time. Under these circumstances, would Mr. Blewitt favour your readers with a few statistical details, to enable myself, and others at a distance, to judge of the capabilities of the spray pump? If it is likely to supersede the old plan, I should suggest an improved mode of working by a vacuum, instead of a force-pump, much more simple than any hitherto used—cheap, powerful, and efficient.—B. ADAMS: *Islington, Oct.* 18.

ADCOCK'S SPRAY PUMP.

SIR,—It is a source of regret to me, in my endeavours to obtain information on a subject, in which I feel so much interest, as the success, or otherwise, of the spray pump, that I should have unconsciously been the means of subjecting one of my oldest and best friends, Mr. James Brown, to the violent attack made upon him by the hon. Member for Monmouth; at the same time, it is a matter of much gratification to find, in your last Journal, a letter replete with all that could be desired, not only as to the clearing up of the soundness of Mr. Brown's scientific views, but also as to his ability in giving his assailant one of the most complete drubbings that has ever fallen to the lot of any one to receive. I would state fearlessly that Mr. Brown's conduct and character is as irreproachable as that of any man's in South Wales. As to his "sagacity" in matters of business, it is well known to Mr. Blewitt that he (Mr. Brown) was appointed to the very onerous and difficult task of carrying out the practical working of the objects sought by the recent formation of the Ironmasters' Association of South Wales. How those duties were discharged are best answered by the fact of the complete triumph of all that was contemplated—the thanks of the united ironmasters being given to Mr. Brown, together with a very handsome sum of money as a reward for his services. So much for Mr. Brown within the last month of his life. In the month of February last, Mr. Brown published, in form of a pamphlet, a Letter to the Committee of the Monmouthshire Canal Company, in which their proceedings were condemned *in toto*, and pointing out a different course of procedure. This apparent ungracious act was well received by those gentlemen, and acknowledged in a formal letter, expressing the obligation and thanks of the committee for the same, and *Mr. Blewitt is now a member of that committee*. In 1845, your columns announced the presentation of an elegant service of plate to Mr. Brown, by some 700 to 1000 subscribers. I could give some instances of Mr. Brown's talents and ability being publicly acknowledged; but will content myself by adding one only to the foregoing, with which I will connect Mr. R. J. Blewitt, M.P. In a letter to the editor of the *Monmouthshire Merlin*, in 1843, the hon. Member writes as follows:—"*Every one in Monmouthshire knows James Brown as an honest, clear-headed, intelligent, man of business.*" Oh, fie! Mr. Blewitt; let me suggest to you, if not the necessity, the propriety of your paying more attention to the numerous irons you have in the fire, and less to that of calumniating your neighbours.—A RHONDDA COLLIER: *Cardiff, Oct.* 18.

[ADVERTISEMENT.]

ADCOCK'S SPRAY PUMP.

SIR,—I must even once more intrude upon your valuable space for a few lines, by way of rejoinder to Mr. Blewitt's last effusion of irritated self-sufficiency and disconcerted malice. I will endeavour to be as brief and explicit as possible. I believe I have before stated, that my original exposure of "Adcock's spray pump," which drew down the hon. Member's indignation on my head, was not written with the view of publicity—it was not intended to see the light. The friend to whom, in answer to his inquiries, it had been addressed, gave my letter to the world, through the medium of your columns, altogether without my knowledge or consent previously obtained. I was as surprised—though, probably, not so unpleasantly so—as the hon. Member at seeing my communication in print. I had not intended to discover myself; and it was nothing but the injurious charges against the writer, in the epistle of Mr. Blewitt, that induced me to throw off the mask. I submit that, in at once acknowledging the authorship of a production, whose testimony was derided, and whose argument it was attempted to invalidate, I was only taking that course which must suggest itself to every honourable mind. Mr. Blewitt, however, would not seem to fall within the category. To my acknowledgment of the obnoxious communication, I have to attribute the repetition of the personal attack of the hon. gentleman. Having no fault of greater magnitude to descant upon, he has endeavoured to swell this into bulk, and distort it into deformity, and then hold it out as something "wicked and malignant." Mr. Blewitt is pleased to declare, that I have "nothing in the shape of experience, mechanical skill, or scientific knowledge, to bring to bear upon the discussion." He that can venture such an assertion, in the face of the world, must care little for the contemptuous judgment of his fellowmen. Were he to hold out any *ipse dixit* so absurd in his own neighbourhood, he knows well that his hearers would laugh him to scorn. But, were it so—and I proudly leave my *quantum meruit* in this regard to the decision of those who know me—were it so, I can tell him of a worse spectacle under the sun than any deficiency of scientific knowledge. It is, when we witness a man adopting the contumelious tone of ill-disguised arrogance and baffled anger at having the absurdities of some favourite hobby exposed to the scoff of the more sensible of the community; and who, in his endeavour to escape ridicule, descends to imputations he cannot prove—while he declines to enter the lists of controversy: thus hopping with levity over proofs and arguments, and perching upon barefaced assertion, which he would fain have his readers receive for conclusion. But, as respects the hon. writer, he may justly be suspected of not believing his own calumny; and to him, therefore, any explanation I may render is not intended to apply. He cannot be convinced who is convinced already; and it is well known of the person I am concerned with, that he will not be ashamed. Thus I hope I have demonstrated, notwithstanding all objections, real or imaginary, that practical acquaintance with the subject on which I have given a judgment, which it has been Mr. Blewitt's endeavour, with so much virulence, to gainsay. It is evident he shrinks beneath my satire; but he is mistaken, if he be led away to a belief in his own judgment, that "I ran a muck and tilt at all I meet." On the contrary, it is because I know so well where to choose my subject, that my weapon is so effective, and that I am able to "lay it on" to such good purpose. But the hon. Member is not a little tender of coming to particulars. He declines to enter into the lists of controversy! He first shoots his missile weapon to raise obloquy against me—*sparyere voces in vulgus non ambiguas*—he ventures the barefaced assertion, that my name is in this district "a bye-word for scorn and contempt;" and when I, with the proud consciousness of the immaculate reputation I bear in the county, take up the gage, the libellous Member, forsooth, draws back, and "soars as softly as a sucking dove." He declines to enter into the lists of controversy. The style of Mr. Blewitt is not unsuited to his cause. Every one can call names—so, within the space of a few lines, this common dauber writes, "anonymous calumniator," "malicious," "most wicked and malignant character," with I know not how many more vituperative epithets and terms. It is indispensable to the hon. Member to affix all this under my portrait, because there is no resemblance. But I will take my features and colouring from Nature. Suppose that I were to proclaim aloud, that a certain Member, who shall be nameless, had heretofore entered into illicit engagements, which it was a virtue in him to violate; and that no man could be more assiduous than he to manage his *liaisons* upon the economic principle of never paying the piper: suppose that I were to urge this, as a strongly-developed trait in the hon. Member's disposition; and that, however thoughtless in his contracts, matrimonial or *par amours*, a disinterested spirit formed no part of his character. Suppose that I were to descend into the indecency of inquiry even into his licentious bearing at certain hotels at Lantarnam, or elsewhere. Suppose I had taken pains to represent the individual, whom I need not more particularly designate, in the character of a seditious firebrand, or a neck-or-nothing politician; and, after having intruded all this, uncalled for, upon the wonder of the public—and when the aforesaid party, whom I had shown up, naturally indignant, defied me to the proof—suppose I were to skulk away with the puling remark, that "I declined to enter the lists of controversy," what must unprejudiced standers-by conclude? Why, just what they do of the bold calumnies that shun the light of evidence, promulgated against my character in Monmouthshire. And I hope the public will judge of the credit that ought to be given to Mr. Blewitt's affirmation in favour of Adcock's spray pump, from the fallacies that he has insinuated with respect to myself. Let me not, however, be seduced to rely too much on justice, or on truth. They have often been found inactive in their own defence. They are apt to give more confidence than help to their friends and advocates, when opposed to characters of that unscrupulous sort with which, unfortunately, I have to deal at present. Assertions that I have been "persecuting the Victoria Iron Company, for the last two or three years, with libels of the most wicked and malignant character," will, doubtless, be repeated again and again, though the writer can have had no means of ascertaining the fact, since, in the same paragraph, he informs the reader, with self-defeating particularity, that these libels were "anonymous." An absurdity like this, uttered at random by malignity, may, perhaps, be echoed by folly; a general accusation of indeterminate wickedness, dispersed among those who do not know its meaning, however the fabricator must be aware of its falsity, may, unhappily, dispose some of your readers to believe it. This, however, is an evil which no care or caution can prevent. This I will say, that had Mr. Blewitt, together with a certain "Scotch Apothecary," exercised ordinary "business-like and commercial sagacity" (*vide* Mr. Blewitt's first letter), your columns would not have received, in all probability, one word in reference to the Victoria Iron-Works.

The hon. Member owes his power of gaining attention, and disturbing our quiet, to the position in society he happens to occupy. He may be compared to a certain animal, of no small bulk, whose obstreperous qualities might persuade us to think it formidable; but we find, at length, that sound and force no not always go together. The braying of an ass proves nothing but his folly. In conclusion, to turn the Member for Monmouthshire's battery against himself, I am borne out by those who best know this speculator, in assuring your readers, in his own words, that he "has nothing in the shape of experience, mechanical knowledge, or scientific acquirement, to bring to bear upon the discussion."—JAMES BROWN: *Newbridge, Monmouthshire, Oct.* 21.

VENTILATION OF COAL MINES.

SIR,—Having read, with much interest, the paper on ventilation, by Mr. Sweetlove, also the observations made against Mr. Ryan's system, by your correspondent, "D," of last week; and, being in possession of facts contradictory of the statements advanced, I will trouble you with a few remarks. Your correspondent, "D," is quite right, when he tells Mr. Sweetlove, that the "firing off of gas is *now* unknown" in South Staffordshire; and I would add, for "D's." information, that it has never been practised since Mr. Ryan first pronounced his system to be in operation; and it is an indubitable fact, the work taken under hand by Mr. Ryan, on his first appearance in this district, was effectually and economically drained of gas, and well aired, as is shown in the following certificate, which, I think, is quite conclusive that Mr. Ryan did much good; and, if "D" would wish to know why Mr. Ryan's system, if successful in that instance, has not become more generally adopted, I will endeavour to tell him. Immediately on Mr. Ryan pronouncing his system to be in operation, and after suffering the most scrutinising inquiry, by allowing the works to fill with gas, and withdrawing it in a few hours, he said to his employer—"Having accomplished the object in view, to your satisfaction, as regards ventilation, seeing the fraud and waste practised by your servants, I will undertake to get and increase the quantity of coal, at a considerably less price than you are now paying." The effect of this humane proposition was, that, in a very few days after it became known to the contractors and colliers, the most determined opposition was offered at their hands—the most malicious and infamous plots were laid for his destruction, by entering the mine from another course, and privately stopping up his gas heads, thereby intending to blow him to atoms on entering. Seeing the uncertainty of his life, he, after getting a certificate from his employer as to the result of his experiments, determined to leave the district for a time, with the hope that the cupidity and prejudice offered would, one day, become a lesson. Most certainly it has; and I fearlessly assert, that, if his proposition had been carried into effect, it would have removed, to a great extent, the oppression, discontent, and dissipation, to which the working miner in this district is, at times, subjected to, and put a stop to the fraud and injustice of the contractors; placing mining on a sound and scientific basis; and would have been some millions sterling advantage to the district—which some day, sooner or later, will, I fear, need the effects of careful and economic consumption. With respect to a deputation from the north, to inquire into the effects of Mr. Ryan's system here, I will pass by, as a piece of nonsense—as, if any parties had come here impartially, with a view of awarding merit where merit was due, they could not have returned, without being satisfied that Mr. Ryan had rendered much good; and also, "that, in introducing his plan, he was encountered by the very parties whom the invention was intended and calculated to benefit (" and the value of his services were fully proved by his employer, in 1838, the Hon. Lord Ward, awarding him, on his return to the district, a pension for life. There is not, at this moment, a 10-yard coal-pit in this district but that is at work, more or less, on Mr. Ryan's *system*; and the more they adhere to it, the safer it is.

Most probably the deputation before referred to were awed with the grandeur of a hanging cliff, of vegetable coal, from 30 to 40, and even 50, feet thick; and would have

rather been in the north again, than trust their scientific bodies far underneath the hanging mass, to make a searching inquiry. What I would adduce, in favour of Mr. Ryan's system, are the following facts:—That coal is porous or crystallized, that those pores contain gas; that they continue to generate gas; and, if that gas is allowed to escape, naturally or artificially, in a great length of time, it would reduce the seam to little better than dust or dirt; that those pores are in continuity, and the gas will creep through them, on an inclined plane, until it meets with some stoppage or dislocation—as a fault or dyke—at which point the greatest amount of gas is always found, and the utmost precaution necessary; which "stoppage," I conceive, though termed a fault, is a wise provision, made by Providence, to prevent the continued exhaustion of the richness of the bed. Every day mining operations prove, that, where the seams continue to grass without interruption, no gas is found in it—clearly demonstrating, beyond a doubt, Mr. Ryan's words, "that, where there is no dislocation of strata, there will be no confined hydrogen; and where there is, remove the cause, and the effect ceases."

I perfectly agree with Mr. Sweetlove, that the most efficient mode of ventilating a very fiery and dangerous colliery is to remove the danger first—not by piping, as that, above all things, would be impracticable—at least, as much as possible, taking into consideration the amount of gas to be dealt with, and the resources of the coalowner's pocket; then, by the simplest mode, which, I suppose, is artificial rarefaction, pour into the mine a sufficient quantity of atmospheric air, for respiration, &c."

It would be no other than justice to state here the experience of one of your correspondents, a coalowner, that, "There is no question, had Mr. Ryan been a coalowner, he would have effected much good;" but he had the discouraging task of engrafting acute and refined views upon the wild stocks of practised prejudice—a disadvantage which nips the buds of an expansive mind, and blights the quality of its fruit. As confirmatory of his opinion on the effects of faults in detaining the products of fermentation, and enriching the quality of the coal, it is to be remarked that, in the small coal-field of the Forest of Dean, where there are no dykes to impede the continuity of the strata, the mines have no inflammable air, which appears entirely drained off, according to his theory, and the coal, correspondently, of a poor quality, compared to the produce of districts where faults abound; and Sir H. Davy said, that, "so clear does Mr. Ryan's system appear, that all explosions from inflammable gas in coal mines ought to be considered as manslaughter."

I cannot think that Mr. Sweetlove could be precisely conversant with the mode of ventilation practised here, or he would not have recommended pipes for the drainage of gas, as the air enters the work by one distinct road, and, when it has received all the contamination the mine is capable of producing, it returns by another distinct road, to which no party has any access.—So much ignorance and slovenliness have the northern viewers imputed to the Staffordshire thick-coal getters, that I think, if they would practise more the mode of draining off the gas in their most dangerous collieries, as much as possible at first, rather than try to dilute it to such a fearful extent, and not pass it from one workman to the other, they would have less sweeping off of hundreds and fifties at a single explosion.—HIBERNIA: *Kingswinford, Oct.* 18, 1847.

"CERTIFICATE, No. 2—The numerous lives lost in Lord Viscount Dudley and Ward's collieries by inflammable gas, and the excuses made use of to account for it, left no doubt in our minds as to the fallacy of the system acted upon. Mr. Ryan being employed, in 1808, to ventilate the dangerous works, he succeeded beyond our most sanguine expectations, without recourse to the former expedients, which were both expensive and dangerous; being employed to open new works, he never suffered them to accumulate gas—which made the agents say, that it arose from natural causes. To convince them, Mr. Shirley allowed him (Mr. Ryan) to withdraw his system: in two days the agents reported the works to be so infested with gas, that it would be impossible for Mr. R., or any one else, to free it, without recourse to the former expensive system—which would take some months to execute. Mr. Ryan then engaged to clear the works in six hours, and risk his life in the performance of it; which was executed, on the 12th of June, to the entire satisfaction of Messrs. Fereday and Smith, who attended to inspect this trial. Mr. Ryan's system is not affected by the weather, and appears well calculated to guard against incendiaries. On the occasion before-mentioned, the agents of Lord Dudley and Ward privately stopped up the air-courses, which, had it been done on the old system, must inevitably have been attended with death. We have no hesitation in saying, that, during a course of experiments for two years and a half, in the most dangerous works, without firing-line, or any other expensive precaution, he did not lose one life, neither was any one rendered incapable of labour; and the effects of his operations are still visible and evident in the works.—W. SHIRLEY; SAMUEL FEREDAY: *London, April* 26, 1811."

MR. SWEETLOVE'S SYSTEM OF VENTILATION.

SIR,—As you have considered Mr. Sweetlove's paper, On Mine Ventilation, which appeared in your Journal of the 9th inst., of sufficient importance to merit notice in a leading article, I have been lead to examine that communication with some care, hoping to collect therefrom a few rays of that light, which of late has been considerately diffused by more than one public lecturer, for the benefit of the benighted members of the black diamond fraternity. Notwithstanding, however, my earnest desire to obtain more lucid views on this confessedly dark subject, I have to confess that the perusal of Mr. Sweetlove's ideas has not had the desired effect; and the only decision I have arrived at, respecting this "valuable paper," is this—"That what there is that is good in it is not new, and what there is that is new in it is not good." Such a project will at once be seen to be wholly impracticable, by every one conversant with the nature and detail of underground operations; and even the weight of Dr. Faraday's great name will fail to stamp any real value on such a practical absurdity as this. Mr. Sweetlove somewhat arrogantly attempts to depreciate the labours of that first of modern coal viewers, Mr. Buddle, and points out exultingly, as one speck in that great light of the mining world, an imaginary defect in his plan for conducting the returning air current to the upcast shaft, whereby, he says, danger is incurred at the furnace; but had Mr. Sweetlove more closely studied the matter, he would have known that Mr. Buddle, by that most ingenious provision, the double fine, had provided fully against even this remotely-possible cause of accident. Whatever may be the opinion of Mr. Sweetlove and his brother theorists, concerning Mr. Buddle's system of ventilation, they may rest assured of this, that all practically conversant with the subject are unanimous as to its superiority over every other plan yet suggested, and its general adoption may safely be urged as the test of its great value. It is positively sickening to see the reiterated attempts made to foist Mr. Ryan's scheme on the mining public, as a sort of universal panacea; for though correct as it may be in principle, it is only applicable to the thick mines of Staffordshire, and wholly unsuitable for the thin mines of the north, and elsewhere. It is not correct either to state that Mr. Ryan met only with unmitigated opposition to his plans; for we have it on evidence that he was not only encouraged in carrying out his schemes by the viewers of the north, but liberally remunerated for his time in addition, until the total inapplicability of his system was fully apparent. I know it to be a vain task for practical men to attempt to satisfy these theoretical enthusiasts of the impossibility of carrying out their visionary schemes into successful working operation, and am aware that they are at once set down as prejudiced bigots, unable to see the merits of any new invention, and unwilling to be beaten out of their long-accustomed track; but let such men only personally visit our mines, in the spirit and manner of the immortal Davy, and, like him, they shall be gladly hailed as the noblest benefactors of a grateful, though much traduced, people—the members of our whole mining community.—THE BLACK DIAMOND: *Kiburne, Oct.* 15.

COAL MINING—MR. SWEETLOVE'S LECTURE.—We have received a communication from our old correspondent, Mr. T. Deakin, of Blaenavon, on this subject, which contains so much matter not bearing on the subject, as well as two or three repetitions, that we prefer giving his opinions on the main point in question to publishing his letter, and for which he must excuse us, as our space is valuable. Mr. Deakin says—"I assure you, Sir, I do not intend to say his plan will not be of use in fiery colliery workings, but I can observe an endless variety of difficulties and expense in the first cost in large collieries, and the impossibility of keeping up this ramification of small pipes that he wishes to introduce into the goaves, or old workings, open at their ends. Why don't these men, who play all their tunes on one string—and that string the ignorance of the working colliery, and the parsimony of their masters—commence a model colliery themselves, and try some of the 1000 and one of their little schemes? Carry a large pipe down the upcast pit, smaller pipes from that, made of iron, zinc, or wood, properly secured against leakage, all but the end, the bearings, fallings, and squeezings of the goaf itself would soon close the ends of the small pipes, and, in some kind of work, would break them to atoms in 50 places in the middle of their lengths; and, as to drawing out the gas by an air-pump, or ventilating bellows, I do think the largest steam-engine ever built would not exhaust his ramification of pipes in a large colliery—for instance, such as I am now working, 1¼ mile long by 1000 yards—and, as the carburetted hydrogen is escaping from the solid coal in 1000 places at once, it is my opinion, from practice, that it is totally impracticable."

EXPLOSIONS IN COAL MINES.

To Sir GEORGE GREY, Bart., Secretary of State for the Home Department.

HON. SIR,—As the attention of the Government is at present engaged in inquiring into the best method of ventilating coal mines in order to prevent, if possible, the recurrence of such awful calamities as have recently taken place at the Ardley Main Colliery, near Barnsley, and others, I feel constrained to come forward and offer my humble advice. I beg to say that I have been engaged in mining operations from the age of 12 to that of 55 years; my occupation is that of general colliery manager, and agent to the executors of the late Samuel Thorp, Esq., in whose service I have been upwards of 30 years—I am also partner in two coal mines working the Barnsley bed. I merely name this that you may see I am not a mere theorist, but a practical man; and it is from a deep sense of the importance of the subject, and a thorough conviction, based on long and successful experience, that the loss of lives arising from explosions may in this neighbourhood be almost entirely prevented, that I have presumed to address you. I assert fearlessly that our mines may be so ventilated as to leave merely a bare possibility of fatality arising from the fire-damp explosions. The plan is not only practicable but simple, and in all cases might be done if the masters were only as careful of their workmen's lives as they are of their own pockets. At the coroner's inquest, touching the late misfortune at the Ardsley Main Colliery, the jury were of opinion that "efficient regulations are not enforced in this district, to prevent the use of naked lights." But, had the case been looked at properly, the verdict would have been, "that efficient regulations are set enforced in this district to prevent *the too great dependence upon Davy lamps*." Excellent and extraordinary as the Davy lamps are, like all other good things, they may be abused, and thus, instead of being a blessing, may become a curse. Their excellent inventor never intended them to prevent the coal proprietors from using all possible means to make their works free from foul air. Unfortunately, however, the masters generally, taking undue advantage of the lamps, jeopardize their men's lives in order to save a trifling outlay. So great has been their abuse, that I am convinced their would not have been the awful sacrifice of human lives in this locality had the Davy lamp never been heard of. The object of the masters of late years has been to try how cheaply, and not how safely, they could work their mines. The time has, therefore, fully come when Government should interfere, and see to it that the poor colliers' lives may be secured, as far as human means can effect. In order to facilitate this important work, I have constructed a model, showing the complete and safe working of a coal mine, and the right mode of ventilation. The coal strata are exhibited in their true position—their intersection by what the workmen call bates, seams, or fissures, in which the foul air or sulphur lurks—the broadgates that ought to be driven in advance of the general works, in order to set the mischief-maker at liberty, and thus prepare for making his exit—the mode of connecting and disconnecting the broadgates and main works in order to ensure a circulation of pure air—the number and positions of the trap doors—the roads, water levels, and air courses, and the number and situation of the pit shafts. It is also accompanied by plans of imperfect ventilation, and a comparison can be made and a right judgment formed. When a master has established his works in the manner shown on this model he has done his duty,—and if an accident should then occur, it may be chargeable to the men's neglect; but I feel certain that the remarks made by Lord Wharncliffe a week or two ago, laying the blame upon the negligence of the men, were uncalled for. I do not deny that some men are foolish, but I assert that the mine should be so constructed that the lives of all the workmen should not be at the mercy of one bravado. To enforce efficient regulations it is incumbent upon Government to impose restrictions somewhat like the following—viz.: to grant an annuity or pension, of not less than 2s. 6d. per week, to every widow, and not less than 1s. 6d. to every child of such widow under 10 years of age, where the father's death has been caused from the master's neglect, to be paid by the master working such mine. I am persuaded some such plan would have a good effect; it would become a master's benefit to consider how *safely*, and not how *cheaply*, his mine could be worked. And yet *we have* always found that the safest plan is also the *cheapest*, for during a period of 24 years we have only lost one life through the fire-damp in the mine I surpraintend. I should feel much pleasure in exhibiting and explaining my model to any scientific person you may depute to inspect it. I am an humble individual, and (having been in early life a working collier), should you require references as to my character and ability, I am authorised to refer you to J. Thornley, Esq., one of our magistrates; R. Thorp, Esq.; or Mr. Whitworth, architect, Barnsley.—J. SUTCLIFFE: *Gawber Hall Colliery, near Barnsley.*

PRACTICAL GEOLOGY AND MINING.

The second of the interesting course of lectures "On Mining, and the Practical Applications of Geological Science," by D. T. Ansted, Esq., M.A., F.R.S., &c. &c., Professor of Geology, was delivered at King's College, on Saturday last.

Professor ANSTED commenced by observing, that in his last lecture he had introduced the subject of practical geology, by explaining the numerous ways in which that science might be applied to different purposes, and the subdivisions into which its study might be divided, whether in respect to the materials themselves, or the earth's crust, as the basis of operations, either in architecture, agriculture, engineering, or mining. He had then adverted to and explained the various facts of geology, which were the most useful and important in practical application, and mentioned the various groups which belonged to the structure of the earth—its mechanical condition, chemical composition, and mechanical position; and the way in which each group of facts might be considered useful or practical, in the strictest sense of the words. Bearing in mind, then, what he had stated in his first lecture, he came now to the nature of the observations which it was necessary to make to apply these facts to useful purposes. These were not very complicated, though they were numerous, and involved distinct results. The first of these involved the construction of geological maps: they could not get on in geology without physical maps, though their construction was the work rather of the mapper than of the geologist. In these maps were put down all those particulars which marked the peculiar features of a country by which it was recognised—its rivers, streams, mountains, and everything that could help to give an idea of the spot represented. Without a good representation of the physical features of a country, it was difficult to produce a good geological map. With regard to physical maps, a great deal did not remain to be done in England, as the Ordnance survey had now been completed, and published for all the counties; and even in Scotland, a few were nearly finished. These were extremely good maps—perhaps as perfect as was necessary; and, with this foundation, an excellent geological map might be made. A good physical map was the foundation of all geological work, and it was absolutely necessary, in order to be able to record geological observations. But while these maps were excellent in this sense, they were not so in every sense. They gave a bird's eye view of the face of the country, but the maps published in Ireland were better, for they were on a far larger scale—six inches to the English mile, instead of one inch; and they not only exhibited every thing in the way of rivers, and the artificial surface covering, such as forests, &c., but they represented the mountains and other elevations, simply by contour lines, and were, therefore, much clearer than the English Ordnance maps, and more useful to the geologist. On them might be depicted the watershed with great accuracy; and this invariably marked out some peculiarity in the nature of the beds themselves, or the circumstances of their association. They showed, for instance, whether there had been a disturbance of the ordinary strata, whether they had been thrown up or depressed, whether they possessed to each other a relative degree of softness or hardness, and what had produced the change in certain directions. The contour map was the best, on the whole, for such purposes as these.

Having then, a good physical map, the next thing was to turn it into a good geological one, which should represent the earth's surface, as it would appear were it stripped of its superficial coating. Such a map marked, therefore, the actual materials of which the earth's crust was made up. With regard to colouring, geological maps were perfectly arbitrary, though some colours were more convenient than others, and the application of many colours was tolerably well settled by custom. It was, however, important so to select the colours, as to make them form the greatest possible contrast to each other, in order to avoid that confusion which was inevitable when shades of colour ran too much together. It was also useful in colouring, to adopt hues which, in some degree, were identified with the rocks which they represented. Igneous rocks, for instance, were usually coloured pink; the older rocks, often blue; limestone of the oolitic period, yellow; chalk, white; and tertiary formations, brown. Maps coloured in this way, were useful to teach great groups of facts by the eye; and thus, by a glance at the map, the geological relations of a whole district, or country, might be seen. If they looked at a physical map, they could see that there were ranges of hills in certain directions; but it was only by means of a geological map, coloured in the way he had described, that the materials of which those hills were composed, could be determined at once. [The lecturer here illustrated this remark, by a reference to several large maps, of various kinds, which were exhibited.] In this way, both maps taught the same thing; but the geological map showed more clearly the construction of the earth's crust. A surface model did the same thing. That on the table was a model of the Isle of Wight; in it might be seen a particular colour, running along the highest line; and wherever that colour was to be found in other parts, it showed that the material there was the same as at the highest ridge. A surface model was, however, useful only to illustrate; it was a convenient thing to talk from, but for the student the map itself would be quite enough. Surface models were, notwithstanding, exceedingly useful, when a minute representation of a smaller district was required. For instance, suppose it were wanted to exhibit the coal of a particular district, one of these models would do it perfectly; but if it were desired merely to show the distribution of coal throughout England generally, a map would be equally useful, and more convenient.

With regard to the first class of observations to be recorded, he, therefore, recommended small maps of England—the one published by the Society for the Diffusion of Useful Knowledge, or that on a larger scale, by Mr. Knipe, or the yet larger ones of the Ordnance survey. There were many other maps, of more or less merit, but all inferior to those he had mentioned.

The nature of the observations—if it were wished to acquire this useful knowledge of geology—involved, of course, a knowledge of the different rocks presented. The first thing was to group the facts they saw in large districts; the next thing, to acquire a detailed knowledge of the district. This could only be done by a study of the rocks, as present in nature, and as disclosed by deep railway cuttings, or mining perforations; and from thence to judge of their nature, by a comparison with the other rocks in the district. Rocks generally were composed of a few very common materials only; the great bulk of the rocks was simple sandstones, limestones, or clay, or these combined, as igneous rocks, the change in which had been generally produced by heat. In some cases, the change was, perhaps, produced by no very high degree of heat; but as the results were the same, they were called by the same name. The group of igneous and aqueous rocks, was easily understood and recognised. The terms by which the various rocks were known were not very complicated; but they required to be known, in order to give an account of them, and that they might be recognised again.

Then again, it was necessary to know something of fossils; because they were the only means of determining the identity of many rocks. It was always worth while, in making a practical survey of any district, to examine the fossils; which, though of no immediate interest to the geological engineer, enabled him frequently to compare the minerals in different districts. If the metallic ores were the subject of his research, the examination of the fossils might often be of the greatest advantage in judging of the metalliferous ores, or of the minerals commonly associated with metalliferous ores. Under any circumstances, the student, or engineer, would be better enabled, by an examination of the fossils of a district, to describe the geological facts with which it was marked.

The study of this group of facts, and the observations arising out of it, therefore, involved a knowledge of rocks, and of the names given to them; of fossils, to enable the student to compare rocks; and, to a certain degree, a knowledge of minerals; because, without it, he would not be so able to apply geological knowledge.

The next thing to be done, was to combine the maps and models that showed only the surface of the country, with others which showed what was beneath the surface. Without this, no accurate practical results could be obtained. The materials on the surface might lie in thin patches, and be placed on the top of other materials. A bed of chalk, for instance, might be 1000 feet in depth, or 10,000 feet. Without such a combination—though they might find chalk here, and chalk there—they could come to no conclusions as to the relations between the two. These could only be arrived at by learning the way in which they were united in the general mass of the earth's crust. When they had come to a great mass of rock, and found out the direction of its dip and strike, and its inclination to the horizon; and then, going on, came to another rock, with its dip and strike in the same direction; they knew that it was the same, and its depth might be determined by its inclination to the horizon. Having obtained a knowledge of the structure of a portion of the earth's crust, they were enabled to make a section, or a representation of what would be found, if the earth's crust were to be cut through; and, having obtained a section, they had a key to the whole district, by which they knew the direction in which the beds lay. Geological sections and solid models gave a distinct knowledge of what was beneath the surface. Without them nothing could be known but a superficial knowledge, of little or no use for practical purposes. When, therefore, sections accompanied the maps, the geologist knew perfectly the construction of the whole district. There were two kinds of sections—one which ran along the surface and over a large tract of country, and the other a vertical cutting, at a particular spot. Both of these were useful.

With regard to the instruments made use of to obtain a knowledge of this kind, a remark or two was necessary. As to maps, it was always supposed, that, when a geologist went into any district, he had maps with him; if he went into a district which was not mapped, it would be necessary first to have it surveyed. He (the Professor) had found it exceedingly useful to be able to check the maps, and a few simple operations and instruments were sufficient for that purpose. The instruments required were, a spirit level, with sight, a pocket compass, a jointed rule, and a graduated arc. These, which might be purchased, united in a small box, for a few shillings, answered all the purposes as well as a clinometer, which cost three or four guineas. By these instruments, which they would be very quickly taught to use, they might determine relative heights to some extent, and perform other similar operations, which would be exceedingly useful—for instance, if he found a particular rock, and there was another rock, of a like kind, on the other side of a valley, and he wished to know the relation between them, he could, with these simple means, often determine whether the distant rock was part of the same bed as the one he was examining. This was particularly useful in mining, as by it might be obtained correct data as to the reappearance of particular veins, or strata, at particular points. Besides these, the geologist must have a hammer and chisel—not that it was necessary, or desirable, to be breaking every rock he came near, but because it was sometimes impossible to determine, without those instruments, the relative hardness and softness of the various rocks. Neither was it advisable to bring away great lumps of rocks, as specimens of any particular district. It was far more useful to give a short and distinct account of the appearances of the district, and how its materials lay. Limestone, for instance, often differed very materially in a few hundred yards; and, therefore, it was little use to take either as a specimen of the limestone of the district: they had the abstract fact that there was limestone—that was sufficient. A great deal of trouble and time, which might be more profitably expended, was thus wasted without any real useful purpose being served. If, however, they did collect specimens, it was essentially important that they should be accurately, and immediately, recorded. Specimens were useless, unless this were attended to.

On the subject of books, it was necessary to observe, that a great many facts were recorded, which must be learned and known. There were, however, very few geological books which were not entirely confined to descriptive geology—or else so far practical, that they did not treat of science at all. In treatises of mining, the latter was very much the case. There were, however, a few very useful books, which treated generally of the subject, and which he recommended. They were, the "Report of a Geological Survey of Cornwall, Devon, and West Somerset;" a work on French Geology, by M. A. Burat; Whitley on "Geology, as applied to Agriculture;" a "Geological Survey of Newfoundland;" M'Adam's book on "Road Making, and its Materials;" Sir Robert Kane on "The Industrial Resources of Ireland;" and the second volume of the Professor's own work on Geology, and a few others.

The lecturer concluded, by remarking that he had gone at greater length into the introduction, as he thought it very important, in giving the first course of lectures which had ever been given on this subject, to set the basis of the study clearly before them, though he might have presumed it was familiar to most of them. He had thought, however, that it would be useful, that their attention should be drawn to the method of treating this important subject.

[The third lecture, "On Geology as applicable to Agriculture," will be given in next week's *Mining Journal*.]

THE CHEMISTRY OF THE METALS—No. III.

BY J. LOUIS JULLION.

[Written for the *Wolverhampton Chronicle*—Continued from *Mining Journal* of last week.]

METALS WHOSE OXIDES ARE REDUCED BY HEAT ALONE.

GOLD appears to have been known in the most remote ages, and to have been highly prized for its many useful properties. The ancients seem to have studied the method of working it in a most eminent degree; their ingenuity in the manufacture of this metal is, indeed, scarcely excelled by the metallurgists of the present day. Gold is the most highly prized metal we have; in all ages, and in all countries, it appears to have been chosen for the most valuable coin on account of its scarcity, its lustre, and its non-liability to corrosion. In former times the gold coin was made of the pure metal, but this has been altered on account of its softness, and consequent liability to wear. Another reason was to prevent the Jews from "trouncing" the coin, a practice very much in vogue whilst the old guineas were in circulation; this was done by placing the gold in a bag, and tossing it backwards and forwards; after some time the bag became coated with gold from the friction, the process was then stopped, the bag burnt, and the gold reduced to a metallic form—these objections are at present obviated by alloying the gold with a small quantity of copper. Gold is of an orange red or reddish yellow colour; its lustre is considerable, yielding only to that of platinum, steel, silver, and mercury; its specific gravity is 19·3—that is to say, it is 19 and 3-10ths heavier than the same bulk of water; it occurs native, alloyed with a little silver or copper; its forms are massive, ramose, and chrystalised, in cubes and octedra. "The veins of gold are confined to primitive countries, but large quantities of this metal are collected in alluvial soils, and in the beds of certain rivers, more especially those of the west coast of Africa, and of Peru, Brazil, and Mexico. In Europe, the streams of Hungary and Transylvania have afforded a respectable quantity of gold; it has been found also in the Rhine, the Rhone, and the Danube. Small quantities have been collected in Cornwall, and in the county of Wicklow, in Ireland."

Gold is the most malleable and ductile of all the metals; its malleability is so great that it may be extended into leaves which do not exceed the 60-1000th of an inch in thickness. Its ductility is also very great, a grain of gold may be drawn out into 500 ft. of wire; "by inveloping it in silver Dr. Wollaston found that it might be so extended as that 700 ft. weighed only 1 grain; in thickness, therefore, not exceeding the 30-1000th of an inch." Common gold leaf is not more than the 28-1000th of an inch thick, consequently 5 grs. are sufficient to cover a surface of more than 270 square inches; in gilding silver wire it is still further extended, "an ounce of gold is capable of covering 1300 miles of silver wire." Its tenacity is considerable, but in this respect it yields to iron, copper, platinum, and silver. Gold melts at 1030° F., and when in a state of fusion assumes a bright bluish green colour. It expands in the act of fusion, and consequently contracts in cooling; it is on this account not applicable to casting. It requires a very violent heat to volatilise it. Gasto Clavius says "he put an ounce of pure gold in an earthen vessel into that part of a glasshouse furnace where the glass is kept continually melted, and kept it in a state of fusion for two months, yet it did not lose the smallest portion of its weight." Kunkell relates another instance of a similar result, neither did gold lose any of its weight after exposure for several hours to the intense heat of Mr. Parker's lens. Hornberg, however, observes that "when a very small portion of gold is kept with a powerful lens at an intense heat, part of it is volatilised." This experiment was confirmed by Macquer, who observed the metal rising at the height of 5 or 6 in., and attaching itself to a plate of silver, which it gilded very sensibly. Lavoisier also observed that gold behaved in precisely the same manner in a fire blown with oxygen gas; by peculiar management, after fusion, it may be obtained in quadrangular, pyramidal crystals. It does not show the slightest tendency to unite with oxygen when exposed to its action in a state of fusion; but if an electric spark be passed through a fine wire of gold, a purple powder falls, which by some has been considered as an oxide of gold; but, in all probability, it is only gold in a very minute state of division. Gold was formerly given in medicine; its properties were said to be "cordial, mundifying, strengthening the heart, cheering the spirit, strengthening the natural balsam of blood, and therefore is given successfully in all diseases wherein the heat, vivacity, and strength of both body and spirits need repairing; it is sodorific, cleanses the blood, discusses humours, and resists the poison of mercury, and other mineral fumes."—*Salmon's Philosophy* 1693. Another very great virtue it was said to possess, was the preventive of marking by the small pox. The method was to cover the parts that were likely to be exposed with gold leaf the moment the disease made its appearance, and to leave it on until the patient recovered. The explanation of this appears to be the fact of the face and neck, for instance, being covered with gold leaf, the patient was not allowed to use any friction, however irritating the pain, for fear of taking off any of the gold, and it is well known that the disease oftentimes leaves no marks if the parts are not irritated. Gold has long been abandoned by all physicians as useless in medicine, and the only use it is now made of in pharmacy, is in the form of leaf gold, to cover pills, in order that the patient may not experience any unpleasant taste in taking them. In the arts it is used as a source of colour, in staining glass, and for this purpose the substance is moistened with a solution of chloride of gold, and then exposed to heat to expel the chlorine; it is then of a beautiful colour, somewhat resembling the carbuncle. Another method is to make a very soft glass coloured with gold, and then to dip the articles into it when in a state of fusion. It is in this manner that the articles, of late years so fashionable, are manufactured. The ground thus given is cut to any pattern, thus removing the coloured portion, and leaving the pattern white, and the ground coloured, or *vice versa*. These articles can be made at a very small cost, in consequence of the small quantity of gold required, 1 dwt. of gold being sufficient for many pounds of glass.

Oxide of gold may be obtained by adding a solution of potassa to a concentrated solution of muriate of gold—the gold falls as a brown precipitate. It must be well washed with water, and dried at a temperature of 100° Fah. If the heat exceed this, part of the gold will be reduced to the metallic state.

Chloride of Gold.—By dissolving gold in nitro-muriatic acid, a solution is obtained of a deep brown colour, and by evaporation this solution yields prismatic crystals of a deep orange colour, very deliquescent, and readily decomposed by heat, leaving a spongy mass of pure gold. When liquid ammonia is added to a concentrated solution of chloride of gold, diluted with about three parts of water, a yellowish brown precipitate is formed, which, if collected upon a filter, washed with a little water, and carefully dried, at a temperature of 212° Fah., is fulminating gold. Bergman says, that this compound consists of five parts of peroxide of gold, and one of ammonia; at a temperature of about 400° it explodes violently, the gold is reduced to the metallic state, and nitrogen gas and water are evolved; by this it would appear that the ammonia is decomposed, then its hydrogen, uniting with the oxygen of the oxide, forms water, and thus the nitrogen is suddenly liberated; it explodes by friction and percussion, an electrical spark will also ignite it. "If two or three grains are detonated upon a piece of platinum foil, the metal will be torn at the point of contact, as is the case with all these detonating compounds." Protomuriate of tin, added to a solution of chloride of gold, occasions an instant change of colour to a reddish brown or dirty purple. "If a piece of tin foil be immersed in a solution of chloride of gold, the same purple powder is presently thrown down upon it, as that precipitated by the protomuriate. This powder is called the purple of Cassius; it is a compound of peroxide of tin, and oxide of gold; it is very much used in enameling, and to stain glass a fine red colour; it is soluble in liquid ammonia, forming a very beautiful red solution. According to Prout, it consists of three parts of oxide of tin, and one of oxide of gold. Oberkampf and Marcardieu state that the gold in excess produced a pink compound, and with tin in excess the compound was violet. These colours are communicated to the enamel; they state that the violet compound consists of 60 oxide of tin, 40 of gold, and the pink about 20 of tin to 80 of gold." If a solution of muriate of gold be mixed with sulphuric ether, it combines with the oxide, and an *ethereal solution of gold* is obtained. Polished steel dipped into this solution, instantly acquires a coating of gold. It has many years been used for gilding delicate cutting instruments; in gilding porcelain, gold powder is generally employed, obtained by the decomposition of the chloride, by heat; it is applied with a pencil, and burnished, after it has been exposed to the heat of the porcelain furnace, for the best kind of work the gold leaf is used thicker than in common. The alloys of gold were fully investigated by Mr. Hachet, in the *Philosophical Transactions*, 1803. His experiments were made with 11 parts of gold to one of alloy, or 38 grs. to the ounce of gold. He found that with maganese, it forms a grey brittle alloy; with iron, the alloy is malleable and ductile, and harder than gold; its colour is dull white, the metals expand by union; so that, supposing their bulk before combination to be 1000, after combination 1014·7. With *zinc*, the compound is brittle and brass coloured; the metals contract a little in uniting, the original bulk being 1000, that of the alloy is 997—the brittleness continued when the zinc was reduced to 1-60 of the alloy even. The fumes of zinc in a furnace containing fused gold make it brittle. Tin formed a whitish alloy, brittle, when thick, but flexible when in thin pieces; bulk before fusion 1000, after fusion 981. The old chemists called tin *diabolus metallorum*, from its property of rendering gold brittle. Mr. Burgley's experiments show that 1-60 of tin does not render gold brittle. The alloy of *lead* is very brittle, when that metal only constitutes 1·1920 of the alloy; even the fumes of lead destroy the ductility of gold—1000 parts become after fusion 1005, the alloy with copper. (*Standard Gold.*) The alloy is perfectly ductile and malleable, but harder than pure gold, and resists wear better than any other, except that of silver. "Gold coin consists of 11 parts of gold and one of copper; of this alloy, 26 troy lbs. are coined into 934 sovereigns and one half sovereign; 1 lb. formerly was coined into 44½ guineas, it now produces 46 29-40 sovereigns." Gold and *mercury* combine with great ease, and produce a white amalgam, much used in gilding; for this purpose the amalgam is applied to the surface of the metal to be gilded, and the mercury is then driven off by heat; the gold remains adhering to the metal, and is burnished afterwards—this process is called *water gilding*. The assay of gold is performed in two operations—cupellation and quartation, and parting; the first is the oxidation of the baser metals, the aid of heat, in a small vessel of bone earth, termed a cupel; the second consists of fusing the gold alloy with about three times its weight of silver, by which the particles of gold are removed to a greater distance from each other, and prevented from covering or protecting any of the particles of silver from the action of the nitric acid. Parting again consists of boiling the alloy in seven or eight times its weight of nitric acid, to remove the silver, diluting the acid with an equal bulk of water or rather more, and repeating the operation till all the silver is extraced. Gold not being soluble in nitric acid, all that the alloy contained is left in the form of powder at the bottom of the vessel; the quantity taken is called the assay pound. The silver assay pound is divided into 12 ozs., and each ounce into 20 dwts. The gold assay pound is subdivided into 24 carats, and each carat into four assay grains. Thus gold of 22 carats means an alloy of two parts of a metal to 22 of gold; 16 would be four of metal, to 16 of gold. In Germany the carat is divided into 12 grains. [*To be continued in next week's Mining Journal.*]

NEW DESCRIPTION OF ROPE.—A rope, manufactured from a new material, called "China Grass," was exhibited on Tuesday last, opposite the Exchange, by the maker, Mr. Thomes Briggs, of Richmond Hill Ropery, Salford. The rope exhibited was 600 yards long, and was manufactured expressly for the iron-works of the Earl Fitzwilliam, at Elsegar, and its weight was 14 cwt. 3 qrs. and 14 lbs. Ropes made from China Grass are much stronger and more durable than those composed of hemp, but are more expensive. Before manufacturing ropes of a large size from this material, Mr. Briggs had some small ones made, which he tested by working in blocks on his own concerns; he found them to work well, also to be very strong, and of great durability. In coal-pits and mines, where ropes of great strength are required, those made from China Grass are much sought for, and no doubt in a short time they will be generally used; their increased cost being comparatively little, taking into account their strength and durability.—*Manchester Advertiser.*

UNFORTUNATE MINERS.—At a meeting of the West Derby guardians, Liverpool, on Wednesday, six persons applied for relief, to enable them to return to their respective parishes, under the following circumstance:—They were miners from Cornwall and South Wales, and was engaged to proceed in the ship *Cobric*, to Valparaiso, but when off Rio de Janeiro the vessel unfortunately caught fire, and was totally destroyed. The passengers were sent on to Rio Janeiro, and remained there for some time under the protection of the British consul, until a ship was found to bring them to this country. They arrived on Monday by the *Antelope*. It was, after a great deal of discussion, resolved to allow them to remain in the house, until an opportunity presented itself for sending them to Cornwall and Swansea.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY ....West Wheal Maria Mining Company—at the mine, at One.
Charing-Cross Bridge Company—offices, at One.
WEDNESDAY...Wheal Carthew Mining Company—offices, at Three.
THURSDAY ....Galloway Mining Company—offices, at Twelve.
Dartmoor Consols Mining Company—offices, at Twelve.
Globe Insurance Company—offices, at One.
Metropolitan Joint-Stock Conveyance Co.—Pine Apple Tavern, at Six.
Albion Insurance Company—offices, at One.
FRIDAY.....Copiapo Mining Company—offices, at One.
SATURDAY....Asturian Mining Company—offices, at Two.
Wheal Concord Mining Company—at the mine.
West Wheal Maria Mining Company—at the mine.
West of England Patent Refining Sugar Co.—offices, Bristol, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

SWANSEA DOCK COMPANY.

On Wednesday, an extraordinary general meeting of this company was held at the Guildhall Coffee-house, City, for the purpose of taking into consideration the report of the committee appointed at a general meeting of the shareholders, held in London, on the 31st of August last; also, for passing resolutions increasing, or reducing, the number of directors of the company, in pursuance of the provisions of the special and general Acts of Parliament constituting the company; and also for taking into consideration the question of bye-laws, alleged to have been passed, by certain directors of the company, at Swansea, on the 19th of August last, and for passing resolutions confirming, altering, or rescinding the same, as to the meeting might seem expedient. At 12 o'clock, the chair was taken by Lieut.-Col. CAMERON (deputy-chairman), when

Mr. JENKINS (the Swansea solicitor) wished to know by what authority the meeting had been called.—The CHAIRMAN stated, that this was a legal meeting, and regularly called under the Act of Parliament. His first duty, therefore, was to know, if there was a sufficient number present to constitute a meeting. He (the chairman) then read the clause of the Act of Parliament, which limited the minimum of attendance to 10 shareholders, holding, in the aggregate, not less than 200 shares.

Mr. JENKINS maintained that the meeting was illegal; for it was in contradiction of the bye-laws of the company.—The CHAIRMAN said, that was not a subject for them to consider; and he should proceed to constitute the meeting, by inquiring how many proxies were represented?—Mr. FRANCIS (the secretary) exhibited a bundle of proxies, which, he said, amounted to 54 altogether.

The CHAIRMAN observed, that, notwithstanding the alleged illegality of the meeting, parties had come with plenty of proxies (hear, hear); for here the secretary held a proxy, as stated in that of Mr. William Thomas, for the meeting to be held on the 20th of October. (Hear, hear, and no, no.) He would like to know if the parties were present who held these proxies?—Mr. FRANCIS replied in the affirmative. They represented 436 shares.

The CHAIRMAN asked Mr. Francis to place the proxies on the table.—Mr. FRANCIS objected; but said, if any particular one was asked for, he would exhibit it.

The CHAIRMAN then directed Mr. Howden (the London secretary) to read the advertisement; which he did, from the *Sun* newspaper, of October 5.

Mr. CARTER said, that alluded to its publication in London, and not at Swansea, which was not sufficient for the purpose. There ought to be, at least, 14 clear days' notice of the meeting, in a paper circulated in the immediate district. (Hear.) He would ask, if the *Sun* was a newspaper sufficient for the purpose, and, then, the third edition?

Mr. HOWDEN said, the advertisement also appeared, the next day, in the *Times* and *Morning Chronicle* newspapers.—Mr. JENKINS said, that was not giving the required notice by the terms of the Act of Parliament.

A PROPRIETOR thought this was mere quibbling, and of no vital importance, and that the business ought to be proceeded with. (Hear, hear.)

Mr. HOWDEN then read the advertisement convening the meeting, and the following report of the committee:—

REPORT.

"We, the undersigned members of the committee, appointed by a resolution passed at your first general meeting, held on the 31st of August last, having met, and fully considered the subject referred to them, beg to report—1st, That we recommend that the number of directors should be reduced to 9. 2d, That a specific sum be placed at the disposal of the London directors, as a consideration for their past services and disbursements. And, lastly, we recommend that the business of the company be, in future, transacted by the said board of nine directors at Swansea; and that the London officers and offices be discontinued.—JAMES SHERMAN, chairman; GEORGE NICHOLLS; J. THEO. JENKIN; GEO. GRANT FRANCIS. DISSENTIENT.

"Mr. Howden, for himself, and expressing, as he believes, the views and opinions of a majority of the shareholders in London, dissentient—stating, that, as by the last proposition the mode of management proposed is so different from the arrangement originally made between the Swansea and London shareholders, and on the faith of which the London shareholders subscribed their shares, that those shareholders should be offered to have their deposits returned to them free of all charge, before any such change of exclusive management can be justly or legally sanctioned, or acted upon.—A. C. HOWDEN.

"Mr. Elderton, one of the solicitors of this company, and also a member of this committee, also dissents from the last recommendation, as being, in his opinion, inequitable towards the London shareholders.—EDWARD M. ELDERTON."

Mr. HOWDEN begged to say, that Mr. Francis had failed to send copies of the book of register, and other proceedings, to the London board: so that they had been quite in the dark as to the doings of the directors at Swansea.

Mr. Carter having taken up much of the time of the meeting in opposition, the CHAIRMAN asked how long he had been a shareholder?

Mr. CARTER said, he had one share a few days ago. (Hear, hear.)

The CHAIRMAN asked Mr. Francis for the book of registry of proprietors, to test the vote of Mr. Carter, as well as the genuineness of the proxies now exhibited.

Mr. FRANCIS admitted that he had not brought the registry book.—Mr. ELDERTON (the London solicitor) then asked, how it was possible that the chairman could test who were shareholders? (Hear, hear.)—The CHAIRMAN was sorry to say that, in this instance, also, Mr. Francis had failed in his duty, and had rendered invalid all his proxies. (Hear, hear.)—After some further discussion, the CHAIRMAN said, he would rather any one than himself should give some reasons as to the object of the London board in calling this meeting.

Mr. ELDERTON then rose, and made some observations in favour of the objects of the directors, as stated in the advertisement. He first alluded to the opinion of the committee, as to the necessity of reducing the number of directors from 17 to 9—of which number he considered the majority should be in London, in consideration of the interests of the London shareholders, who had subscribed for 1727 of the shares of the company, in which was included those taken by Col. Cameron and his family. The London shareholders had some little interest in the company. (Hear, hear.) The number subscribed by the Swansea people was 1139. (Hear, hear.) He next alluded to the bill passing favourably through the House of Commons, partly through the influence of Col. Cameron; but lamented that a discovery was made in the House of Lords of one of the clauses being so materially altered, as made it necessary to hurry it back, when corrected, with all speed to the House of Commons, in order to get it passed that session. He saw Mr. Bain, the Parliamentary agent then, present; and he could correct him, if he were in error, when he stated that, in the clause, when it enacted that the meetings of the directors shall be held monthly in London, the word "may" had been surreptitiously placed in its stead by some person, after the bill had been settled in the Commons. (Hear.)

The CHAIRMAN asked Mr. Bain, whether that alteration was made from instructions?—Mr. BAIN replied, that he had instructions certainly; but he could not, without reference to his papers, say by whom they were given.

The CHAIRMAN asked, if they were given by the London board?—Mr. BAIN said, certainly not. (Hear, hear.)

Mr. ELDERTON said, the question had not been carried further, or the party who thus imposed on the House of Parliament, would have found himself in an awkward position. He (Mr. Elderton) then alluded to several acts of the directors at Swansea, as illegal, particularly that of calling the first general meeting of the company, before any shareholders had been registered as such; for the scrip had not been exchanged for shares. Capt. Morgan had the trouble of coming up to London, when he stated, that another meeting must be called, in consequence of the scrip not being exchanged in time for the meeting. He stated these things to show the unbusiness-like way things were conducted by the board at Swansea. The bye-laws, stated to have been passed by the directors, were quite illegal, particularly the 6th and 11th. The 6th enacted, that all calls upon the shareholders should be made at meetings to be held at Swansea—so that, no matter what the state of the market, the gentlemen at Swansea were alone to decide the expediency of making calls. The 11th was equally objectionable. The Act, which was sent back to the Commons, and altered as it originally stood, stated that the London board should meet once a month, which meetings they were, by other Acts, empowered to adjourn; but, according to this bye-law, the London directors, whatever might be the importance of such monthly meeting, must, if it be adjourned, hold the adjourned meeting in Swansea. Such a law was a fearful absurdity. He would only refer to these two, assuring the meeting that the remainder were, likewise, such as he thought no gentleman of honour, character, or spirit, could submit to have imposed upon them. ("Certainly not.") He concluded by asking the Swansea directors, how they could think of carrying the company on at Swansea, when the understanding of the holders of the majority of shares was, that its seat of business was to be in London? If such was the resolution, it would be the duty of the parties at Swansea towards the London shareholders, to pay them back their money, and relieve them from all liability, as far as concerned these 1727 shares. (Hear.)

Mr. JENKINS said, that amount was now reduced to 1500.

Mr. ELDERTON: Admitting that to be the case, and that the money most principally came from the London shareholders, they ought to have the greater control over the management. If the management was to be at Swansea, let them give his friends back their money. If it were to be in London, he thought he could say, that they would not make a call at all, or borrow money; but that the money would be provided from another source. (Hear, hear.) Under all the circumstances, therefore, he thought it would be best for all parties concerned, that the management should not be at Swansea, but in London; and that the directors should avail themselves of the assistance of the directors at Swansea. (Hear, hear.)

Capt. PRICE, R.N., then moved the first resolution (for which see advertisement, in another part of the Journal); in doing which, he adverted to the chairman (Capt. Morgan) having, on one occasion, most irregularly made an addition to the minutes of the board of directors, after that board had adjourned; an act, in his opinion, sufficient to deprive the London board of all confidence in the Swansea directors.—Captain NORCOTT, R.N., seconded the motion, which was passed unanimously.

Capt. NORCOTT proposed the second resolution.—Capt. EELE seconded it.

Mr. JENKINS here insisted on recording his proxies.—The CHAIRMAN objected to receive the proxies; the book of registry not being at hand to test their validity.

Mr. ELDERTON said, the chairman was justified in refusing them under the circumstances.—The second resolution was then put, and carried.

Mr. FRANCIS and Mr. JENKINS protested against the whole of the proceedings.

The CHAIRMAN said, they were in an anomalous position; for here they found the solicitor (Mr. Jenkins), and secretary, as partisans against the other shareholders. (Hear.)

Mr. JENKINS demanded a poll on behalf of those he represented.—The CHAIRMAN refused it, on the ground that the registry book was not produced, so as to test those proxies.—A PROPRIETOR said, an action would lay against the secretary. (Laughter.)

Capt. EELE, R.A., then moved the third resolution.—Capt. NORCOTT seconded it.—The motion was passed unanimously.

A PROPRIETOR asked, who were to be the directors at Swansea?—Mr. HOWDEN said, that Mr. Dillwyn, a gentleman who took a great interest in the dock, had been confirmed as a director. There was also Mr. G. B. Morris, whose father (Sir John Morris) held large estates in the immediate vicinity of the dock. These two gentlemen would make up the nine directors.

The CHAIRMAN said, in answer to a proprietor, that the larger number of directors must be in London, as the Swansea gentlemen could not attend so often.

Resolutions for rescinding the bye-laws passed by the directors at Swansea, on the 19th of August last, and for fixing the future management of the company in London, were then passed unanimously.

Mr. PRICE GAMESON made an allusion to the *Cambrian* newspaper, of the 16th October, where it was stated by Mr. Francis, that the harbour trustees had spent above 90,000*l* in the improvement of the harbour, which was still inadequate for the purposes of Swansea. He mentioned this, as a proof of their incapacity to administer the affairs of this company. (Hear.)

Col. CAMERON observed, that it was his only object to see the docks completed. He should be happy, at any time, to retire from the direction, as well as his two sons, if any other gentlemen should be deemed more suitable by the shareholders. (Hear, hear.)

Mr. WEST moved, and Mr. BARHAM seconded, a vote of thanks to the chairman, for his urbanity and impartial conduct in the chair—which was passed unanimously.—The meeting then separated.

SWANSEA DOCK COMPANY.

An extraordinary general meeting of shareholders also took place at the Castle Hotel, Swansea, on Thursday last—Capt. EVAN MORGAN, R.A., in the chair—at which resolutions were passed, to the effect that the company disavows any further connection with the London board of directors, Mr. Elderton (the solicitor), and Mr. Howden (the London secretary). It will thus be seen, that the parties resident in London and Swansea have now come to an open rupture. The advertisement, containing the resolutions, arrived too late for insertion in our present Number, but shall appear in our next, when we shall endeavour to lay before our readers the true position of the parties.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.—The adjourned meeting of the shareholders, connected with this unfortunate and ill-managed affair, was held, only to be adjourned.—P. H. Muntz, Esq., was in the chair; and Mr. Mozley took occasion to express his regret at the conduct pursued by the solicitors of the company, in their having issued 400 writs, in enforcement of calls, when such course was quite uncalled for; and he boldly called in question the character of professional men who could act in such a manner; the issue of one writ was as good as a thousand, and he was assured in Liverpool that such proceedings were altogether unprofessional. The writs had been also served in the most public and offensive manner, and even ladies had been served with them at their carriage windows. Mr. Whateley, one of the firm, stoutly denied the charge, declaring they had taken no steps, but what circumstances justified. The meeting then adjourned until the 16th Nov.

QUADRUPLE RAILS ON THE LONDON AND NORTH-WESTERN RAILWAY.—After much discussion in the board, during which there was considerable opposition to the measure, it has finally been resolved by the directors of the London and North-Western Railway that quadruple rails shall be laid down upon their line between Camden-town and Watford, 18 miles down the line. The time, however, for the commencement of these new, and, as they appear to us, unnecessary works, has been postponed indefinitely. Indeed, the directors, although they have finally determined upon the proposed addition being made, have at the same time wisely resolved that the works shall not commence until the money market assumes a more encouraging aspect. The two engineers, Mr. Stephenson and Mr. Locke, were both decidedly in favour of the proposed addition to the existing rails, but we have not heard how they propose to pass the tunnels, which are barely sufficient for the four rails at present laid down. During the discussion which took place relative to the adoption of the quadruple rails, some of the parties recommended that, instead of quadruple rails being laid down to Watford, a new line of railway should be made from the Tring branch of the Buckinghamshire Railway down to Camden-town—it being argued by those who put forward this view, that such a new line would not cost more, if, indeed, it cost so much, as doubling the line to Watford, while the advantage would be gained of accommodating an entirely new and populous district—namely, that which lies midway between the London and North-Western and the Great Western Railways. The scheme, however for the quadruple rails, as we have said, was adopted, though not unanimously, nor without some very lengthy and occasionally warm discussion.

RAILWAY PASSENGERS' SIGNAL.—Mr. Maples, of Brick-lane, Spitalfields, has invented an extremely simple apparatus for enabling railway passengers to communicate with the guard of the train. An upright piece of wood, moving in a groove, is placed in each railway carriage, and, when lifted up by means of a brass knob, a flag by day, or a coloured lamp by night, may be displayed to apprise the guard that something is wrong. An inspection of Mr. Maple's model is scarcely necessary to prove how easy it is for railway companies to provide some inexpensive and effective means of communication between the passengers and guard, to be used by the former in the event of accident. The great obstacle to be overcome arises from the unwillingness of railway directors; but we may reasonably hope, after the accidents and loss of life which have recently occurred, that some railway company will entitle themselves to the thanks of the public, by showing that their passengers may be safely entrusted with a power which should only be used under circumstances of serious and imminent danger.

NEW RAILWAY SIGNAL.—A signal of a novel description has recently been fixed to the guards' carriages on the South-Western line, consisting of an enormous bell and a red flag. Upon the guard discovering anything wrong in the train, he can, by merely pulling a wire, cause the bell to ring very loud, and at the same time a red flag flies up, as a signal that the engine-driver is immediately to stop the train.

RAILWAY PROGRESS.—The works of the Great Northern Railway in the vicinity of Lincoln are rapidly advancing; on the west, the leading of ballast has extended along the Holmes very nearly to the upper Witham, and in the course of a few days will be completed to that river, across which a temporary bridge is being constructed, for the conveyance of the ballast to the river-bank below Lincoln; in the station-yard, adjoining the High-street, the ground is being lowered for the level of the line, and the long tunnel-bridge is completed except the stone copings.—*Lincoln Times.*

ABERDEEN RAILWAY.—We understand that the works on the southernmost portion of the Aberdeen Railway are now in such a state of forwardness as to be ready for the partial opening of the line between Friockheim and Montrose, as soon as the Government officer has made his inspection of the works and plant. The first locomotive engine to be put upon the line has just been turned out at the establishment of Messrs. William Simpson and Co., of this city. The tender was despatched overland to Montrose on Thursday last, and is to be followed by the engine this morning; the former drawn by 10 horses, the latter by 20.—*Aberdeen Journal.*

CHESTER AND HOLYHEAD RAILWAY.—The directors have determined not to open the line to Rhyl until the completion of the works to Bangor, which is confidently expected by the 1st of December, the time fixed for the opening for public traffic. The works between Penmeau Back and Bangor are enormously heavy. The tunnel through Penmeau Back is cut through solid freestone. It has been worked by driftways, or side openings, from the face of the rock towards the sea. There are seven of them, of the aggregate length of 574 yards; their size is above 7 ft. square, admitting four men to work at each face; and the average progress each set of men have made has been 2½ yards per week.

IPSWICH AND NORWICH RAILWAY.—The works have been resumed on the heaviest part of the line, and also at the end next Norwich. From Haughley towards Norwich five miles of the line are nearly completed and will be shortly opened. The line to Norwich is more than half completed, and the progress has been equal to that of any other line of equal extent in the country.

NORTH STAFFORDSHIRE RAILWAY.—The directors of this undertaking expect to open the southern portions of their line in the early part of the ensuing spring—that is, from Stoke-upon-Trent to Norton-bridge, on the Grand Junction line; to Colwich, on the Trent Valley line; and to Burton, on the Midland line, with the exception of a short tunnel on the latter line, near the town of Longton.—*Macclesfield Courier.*

OLDHAM EXTENSION RAILWAY.—The new line of railway, extending from the present station at Oldham to Mumps, Greenacres Moor, was formally inspected on Saturday forenoon last, by one of the Government inspectors of railways, who, after a searching examination of the two tunnels, and the remainder of the line, pronounced the new portion in a fit state to be opened. It is, therefore, expected that this branch will, in the course of a few days, be opened for passenger traffic.—*Manchester Guardian.*

ARTIFICIAL STONE FOR BUILDING, SCULPTURE, &c.—We have, during the past week, had an opportunity of inspecting some specimens of this material—for the process of manufacturing which a patent has been obtained—and which, for closeness of texture, uniformity of grain, and all the apparent qualities for withstanding uninjured the effects of the atmosphere, damp, and frost, is certainly superior to any of the respective qualities of the oolite, or freestone, from Bath, that still harder from the Isle of Portland, or the best granites, which this kingdom produces. Having ascertained the nature and composition of the various strata by analysis, the chemist is enabled to imitate them by synthesis—that is, adopting the proportionate quantities of each simple substance found in them, he produces a material in all its principles the same as the natural copy, with this difference, that while from the countless ages it has taken to form the various beds with which geologists are acquainted—from the various convulsions they have been subject to from electricity, the action of water, and other causes—no large portion, from even the same quarry, is found of uniform texture, or free from veins of foreign matter—while that manufactured by art, is perfectly free from these objections. It is upon these principles that the artificial stone under notice is manufactured—the principal ingredient of which is silex, which, is first reduced to a glutinous liquid, and forms the basis of the composition. By varying the proportions of the substances employed, and, by subjecting them to modified processes, the patentees can obtain at pleasure the hardness of granite, or the softness and friability of sandstone; they can produce the durability and general character of the stone of Portland, or the compact and close texture of marble; and they can, with equal ease, obtain a result which rivals in its applicability to manufactures the grindstones of Staffordshire. This manufactured article is applicable to every purpose for which natural stone is employed—such as building, sculpture, coping stones, steps, every kind of variegated or tessellated pavement, or ornamental work for pillars, pillasters, capitals, cornices, &c. It may be cast in moulds, takes a sharp and perfect impression of the dye, and will save the sculpture an infinity of time and labour, as the mould, once complete, whether for statuettes, or figures of the size of life, any number of impressions can be produced perfect from the mould. Its extremely low cost for all purposes, its durability and elegant appearance, under all circumstances, must secure for it a large demand.

ORIGINAL REGISTRY OFFICE, FOR THE SALE AND PURCHASE OF MINING SHARES.
No. 28, THREADNEEDLE-STREET, LONDON.
CROSSMAN, SOMMERS, AND CO., AGENTS.
SHARES FOR DISPOSAL.

Devon and Courteenay Consols	South Wheal Sophia
East Birch Tor	Scarton Consols (Scurton)
East Crowndale (Tavistock)	Trelawney
East Wheal Rough Tor	Wheal Susan
Great Wheal Rough Tor	Wheal Ann (Bridford)
New East Crowndale	Wheal Barbara
North Wheal Camel	&c. &c. &c.

BRETT AND LITTLE'S TELEGRAPH.—The attention of Railway Companies is INVITED to the OPINIONS of the PRESS, in reference to our ELECTRIC TELEGRAPH.—For terms of license, or to view, apply to
BRETT & LITTLE, Furnival's Inn, London.
"The working models of their various inventions make an exceedingly interesting exhibition to scientific men."—*The Times*, August 18.
"There is scarcely a necessity that is not supplied, and that by mechanism of singular simplicity."—*Morning Herald*, August 19.
"The whole is a highly interesting and intellectual exhibition."—*Mining Journal*, August 21.
"An extremely interesting exhibition—not only to the man of science, but to every one anxious to comprehend the working of the electric telegraph."—*Illustrated London News*, August 28.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.
PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.
These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.
FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.
VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

TO ENGINEERS, RAILWAY AND STEAM-BOAT COMPANIES,
AND THE OWNERS OF STEAM-ENGINES IN GENERAL.
W. & C. MATHER beg to call the attention of the above parties to their
PATENT ELASTIC METALLIC PISTON.
From the great satisfaction it has already given, they can, with confidence, recommend it. The following are some of its excellent properties:—
1. The great, equable, and mild elasticity: its being perfectly cylindrical and self-adjusting—thereby enabling it to yield, with the least possible friction, to any inaccuracies of the cylinder, whether oval or taper.
2. Its extreme simplicity and lightness—the packing consisting of ONLY TWO PIECES OF METAL, having vertical and horizontal elasticity in due and proper proportion, independent of each other—the horizontal elasticity being also independent of SCREWING DOWN THE JUNK RING OR COVER.
3. It takes the least possible space; and is, therefore, well adapted for air and water pumps.
The above patent was unsuccessfully opposed by Mr. Goodfellow, the patentee of a piston, having *three angular rings*, of a bevil form.
The Solicitor-General conceived that there was not the slightest similarity between them, as may be seen from the subjoined letter from Mr. Carpmael, through whom the patent was taken.
W. and C. M. can refer to upwards of 100, made since the date of the patent (April, 1846), each of which is giving entire satisfaction. They beg to call attention to the fact, that, in a number of cases, they have replaced those made of *three annular rings of the bevil form*, a description of which appeared in the *Mining Journal* of Saturday, October 3, 1847.
[LETTER REFERRED TO.] *April 2, 1846.*
DEAR SIRS,—Mr. Solicitor-General took the hearing in your patent yesterday, at the Privy Council, and decided that the invention did not *interfere*; we are, therefore proceeding with the patent. We are, your obedient servants,
Messrs. Mather. POOLE & CARPMAEL.
The object of publishing the above letter, is to convince parties wishing to use W. and C. Mather's pistons, that they have nothing to fear from the caution which accompanied the advertisement referred to, or the unfounded reports which are industriously circulated from the same quarter.
Locomotive and other pistons guaranteed for *twelve months*.
Salford Iron Works, Manchester, Sept., 1847.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS,
TUBES FOR STEAM, GAS, AND OTHER PURPOSES,
ALL SORTS OF GAS FITTINGS.
THE BIRMINGHAM PATENT IRON TUBE COMPANY,
42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,
MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.
42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.
WORKS—SMETHWICK, STAFFORDSHIRE.
LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

THE PATENT OFFICE AND DESIGNS REGISTRY
No. 210, STRAND, LONDON.
INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.
Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.
Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.
Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

UNDER ROYAL PATRONAGE.
KEATING'S COUGH LOZENGES are indispensably necessary, both for the Cure and Prevention of Coughs, Asthmatic, and all Pulmonary Complaints, during this changeable weather.
CURE OF COUGH OF EIGHT YEARS' STANDING, ACCOMPANIED WITH SHORTNESS OF BREATH!
Birkenhead, near Liverpool, Jan. 8, 1847.
SIR,—I have been afflicted with a severe cough and shortness of breath for nearly eight years, and after trying various remedies, did not find myself any better. I purchased a small box of KEATING'S LOZENGES of you, from which I found great benefit. The second box, 2s. 9d. size, completely cured me, and I can now breathe more freely, and am as free from cough as ever I was in my life. Hoping that others, similarly afflicted, will avail themselves of so certain and safe a remedy,
I remain, Sir, yours faithfully, WILLIAM ANDERSON.
To Mr. Geo. H. Howell, chemist, 72, Dale-street, Liverpool.
Prepared and sold, in boxes at 1s. 1½d.; tins 2s. 9d., 4s. 6d., and 10s. 6d. each, by THOMAS KEATING, chemist, &c., No. 79, St. Paul's Churchyard, London.
N.B.—The safety attendant on the use of these Lozenges, together with their agreeable flavour, has given them a well-merited popularity.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,
26, *CORNHILL, LONDON.*
Capital £500,000.—Empowered by Act of Parliament.
This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.
Assurances for terms of years are granted on the lowest possible rates.
DIVISION OF PROFITS.
The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 95 per cent. on the premiums paid on each policy effected on the profit scale.
EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 16 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

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